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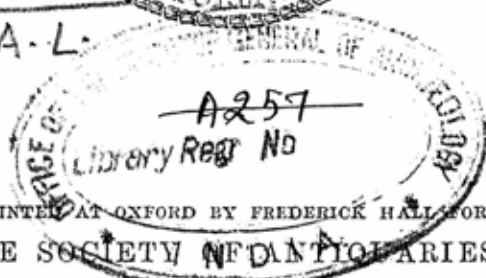
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PROCEEDINGS
OF THE
SOCIETY OF ANTIQUARIES
OF LONDON

SESSION 1918-1919.

THURSDAY, 21st NOVEMBER 1918.

Lieut.-Colonel GEORGE BABINGTON CROFT LYONS,
Vice-President, in the Chair.

Samuel Perkins Pick, Esq., was admitted a Fellow.

The CHAIRMAN referred to the recent presentation of Stonehenge to the nation by Mr. Chubb.

Sir HERCULES READ, speaking on the recent history of Stonehenge, said:

I feel that it is my duty to add some few words to those that have fallen from the Chairman. The Society has been so intimately connected with the recent history of Stonehenge, and I myself, as an officer of the Society, have necessarily been the exponent, and at times the defender, of the Society's action, that I think it to be desirable to put on record some statement on the subject.

The activities of the Society practically began with the present century. The fall of the stones on the last day of the nineteenth century drew attention to the state of the monument, and the Society approached Sir Edmund Antrobus, the owner, advising certain precautionary measures. These recommendations were gratefully received, and Sir Edmund accepted the control of a Committee of the Society in conjunction with the Wiltshire Society and the Society for the Protection of Ancient Buildings, but undertook all the necessary expense.

As the Society is aware, this work was begun, and the raising of the huge leaning stone was successfully completed under the competent direction of our Fellow Professor Gowland in the year 1901, and his account is printed in the fifty-eighth volume of *Archæologia*. The replacement and safety of the other stones was to have been dealt with in due course, but difficulties supervened, and nothing was done.

During all this time I had been trying to compass the purchase of Stonehenge for the nation. In the early years of the century I had endeavoured to persuade the owner that his estimate of the money value of the monument, based on the purchase price of £11,000 with interest for nearly a century, had no relation to the market value of the day. In this I had some success, and even went, supported by Lord Dillon, as a deputation to the permanent head of the Treasury, where our reception was hardly cordial; in fact it seemed to me that this gentleman felt that he was dealing with people of very doubtful sanity, if they could imagine that the British Government would concern itself in any way to facilitate such a purchase. Thus, the Government being unwilling to do anything to help the purchase, it was not easy to get the necessary funds. But this would not have been insuperable had not Lord Eversley stated in *The Times* that the owner had no property in Stonehenge, nor any right to enclose it. As you know, he and others equally ill-advised, brought an action against Sir Edmund Antrobus on the latter issue. You will remember that the case was decided against Lord Eversley and his backers, and the judge stated, as might have been expected, that they had not a leg to stand upon. But all the same this action disturbed the market, and the matter slept for some years.

You will doubtless be wondering how I proposed to pay for Stonehenge, supposing the negotiations had been successful. I am glad to be able to tell you that it was Lord Astor (then Mr. Astor) who encouraged me to proceed with the business, and try to reduce the price to reasonable proportions, in which case he was ready to pay for it and hand it over to the nation. As I think everybody knew even then, he had made his home here, become a British citizen, and identified himself entirely with the interests and aspirations of this country.

It was in the autumn of 1912 that I was at Stonehenge with our vice-president, Bishop Browne, and others, and in visiting Sir Edmund Antrobus afterwards I got him at last to quote a price that seemed to me to be reasonable. Soon after this I was staying with Lord Astor and spoke of the business, and finally put the proposal in writing. To this letter I received from him a very sympathetic reply, and was empowered to

proceed. Many difficult problems then arose. Sir Edmund wished to impose conditions with regard to the future control of the monument and other matters, which could not be entertained. Further, at that time there appeared a danger, if Stonehenge were to be handed over unconditionally to the Government, that the plans made for its safety by the Society might be upset, and it was thought prudent to vest it in some permanent public body. The Society of Antiquaries, the National Trust, and the British Museum were in turn contemplated, but all for one reason or another thought inappropriate.

Finally, I offered Sir Edmund Antrobus the sum of £20,000, on the understanding that the margin of land surrounding the actual monument should be increased so as to give it an adequate and dignified setting. As to this I anticipated no difficulty, as Sir Edmund had said throughout that the land was worth so little that I could have any reasonable amount. It appeared all the same that there were necessities with regard to the grazing of the sheep; that made it undesirable to enclose certain parts of the plain, and possession without enclosure would not in my opinion have met the demands of Stonehenge, and Lord Astor took the same view. Thus what appeared to be a very trifling thing sufficed to bring the whole of the negotiations to a summary ending. In spite of the unpromising nature of the business I still made one more attempt, but without effect.

It was natural that while these negotiations were going on, knowledge of them should be limited to very few people, and Lord Astor did not wish his name to be mentioned. Now, however, on all grounds I feel strongly that it is desirable that both the Society and the larger world should be told what efforts have been made to secure the possession of Stonehenge for the country, and that it was due to the enlightened public spirit of Lord Astor that it was possible to enter into negotiations under satisfactory conditions. It is evident from the very large sum of money that he placed at my disposal, that he was most desirous of completing the purchase, and the failure of the attempt should in no way diminish the recognition of his public-spirited action.

This brings the story down to the time of the sale of the Antrobus estates, after which the later and more fortunate developments in the history of Stonehenge are matters of common knowledge.

The SECRETARY remarked that while the Society might well express their satisfaction at the successful ending of a difficult matter, he himself had special reasons to do so, since for the future Stonehenge would be in the charge of his Department. He called attention to the fine measured drawings made under

Sir John Soane's supervision over a century ago, and exhibited to the Society by the kindness of their Fellow Mr. Arthur Bolton, curator of the Soane Museum. In 1901 the Society had undertaken the careful excavation of a small part of the area of Stonehenge, under the direction of Professor Gowland, and the carrying out of a complete exploration of the whole of Stonehenge under the same auspices and with the same care and thoroughness was greatly to be desired. If the Society would agree, when occasion allowed, to undertake this work, he was prepared to move the Commissioners of Works to give their consent, more especially since the services of Professor Gowland were still available.

Professor GOWLAND said the statement as regards Stonehenge and its future would be extremely gratifying to all present, and the patriotic donor of the monument to the nation deserved the special thanks of the Society. Stonehenge would now be under the charge of the Secretary of the Society as Inspector of Ancient Monuments, and its safety, conservation, and exploration were secured.

The late Sir Edmund Antrobus while always willing, and, in fact, anxious to do anything that the Society of Antiquaries might advise as to making safe any of the stones which were in an unsafe position, was strongly opposed to any excavations excepting those which were necessary for that object. That the Society should now be granted the privilege of making a thorough exploration of the monument in order that its origin and purpose might be authoritatively determined would be welcomed by all the Fellows. It was now nearly seventeen years since it was his privilege to conduct on behalf of the Society the excavations in connexion with the setting up of the leaning stone, and it had ever since been his ambition to carry out any further excavations that might be decided on. He need hardly say, therefore, how delighted he was to be entrusted on behalf of the Society with the supervision of the proposed exploration. As he had now retired from the Professorship of the Royal School of Mines, it would give him the greatest pleasure to devote his whole time to the work.

He begged to move the following resolution :

'That the most hearty thanks of the Society be accorded to the Secretary for his proposal to advise the Government to allow the exploration of Stonehenge, and that the Society of Antiquaries be requested to undertake it.'

This was seconded by Sir Hercules Read and carried unanimously.

On the motion of the Chairman it was resolved that letters of thanks be sent to Mr. Chubb for his generous gift to the nation, and to Lord Astor for his endeavours to secure the monument.

ARTHUR T. BOLTON, Esq., F.S.A., curator of Sir John Soane's Museum, exhibited drawings of Stonehenge preserved in the museum, on which he contributed the following note:

In September 1817, John Soane, R.A., Professor of Architecture in the Royal Academy since 1806, sent two of his pupils to make a most careful survey of Stonehenge. They appear to have been there ten days, and four remarkable drawings were produced. Being intended to serve as lecture diagrams their size is four and a quarter feet by two and a quarter, and being shaded and finished in colour they are very effective. The plan is elaborately triangulated and figured, and is a complete record of the state of the monument at that time. There is a bird's-eye view set up from the plan with the shadows of the stones projected, and also a fine landscape, which gives an idea of the grandeur of the whole monument in its setting. The fourth drawing is a detail showing the tenons and mortises on the ends of the great stones. The two pupils concerned were Henry Parke (1790-1835) and George Bailey (1792-1860). Parke entered Soane's office in November 1814 and left in May 1820, when he went to travel abroad with a gift of £100 from his master. He went to Italy, Greece, and Egypt, and there are some 600 drawings of his in the library of the Royal Institute of British Architects. He seems to have been away from 1820 to 1824. His most valuable work was done in Egypt, where he made a great plan of Philae.

George Bailey entered Soane's office in August 1806, and remained until his master's death, 20th January 1837, when by the will he became the first curator of Sir John Soane's Museum. Bailey drew up the first hand-book and zealously maintained the tradition. He was also one of the hon. secretaries of the R.I.B.A. The zeal and energy of Soane, who in 1817 was sixty-four, and had already been eleven years professor at the R.A., is very remarkable. There are perhaps 2,000 diagrams of his in all at the museum, and they represent an immense expenditure of time and money. This interest in architecture and antiquities Sir John Soane maintained to the date of his death, at the age of eighty-four, on 20th January 1837.

G. F. HILL, Esq., M.A., F.B.A., read the following paper on an armorial slab of a Hospitaller from the castle of St. Peter at Budrum:

The armorial slab which is the subject of this communication

(fig. 1) was obtained this spring in a Sussex village, whither it had found its way from an antiquity dealer at Eastbourne a few years before. How or when it came to England I have not been able to ascertain; but there is reason to suppose, as I shall show, that it was in its original place in Asia Minor in 1856. It is of a greyish-white Greek marble, of the kind generally called Parian; its dimensions are $24\frac{1}{2}$ in. (61.5 cm.) high by $15\frac{1}{2}$ in. (39.5 cm.) broad. The shield bears a plant of some kind eradicated, and a chief of the Order of St. John of Jerusalem (the silver cross on a red field). The spaces on either side of the base are filled with very spirited foliage, carrying a suggestion of acanthus leaves, with small pine-cones filling the intervals. Below is the inscription, with three-armed stops:

~ E ~ ERANSI ~ DEBO
XOLS ~ CAPITA ~
~ ANNO ~ 1484 ~
~ 85 ~ 86 ~

The lettering is in the fine Italian style of precisely the period indicated by the figures.

It is evident at the first glance that the slab belongs to the class which is familiar to visitors to the island of Rhodes, where the shields of the Knights of the Order form such a prominent feature in the decoration of the buildings. It is also obvious that the stone-cutter has blundered in the first two letters, which should be F, not E, and in the sixth, which should be C, not S. With these corrections, the inscription is to be interpreted F(rater) FRANCH(us) DE BOXOLS CAPITA(neus) ANNO 1484, (14)85, (14)86.

Fray Francisco de Boxols was a fairly important member of the Order in his day, although he is altogether forgotten now. A certain amount of search has revealed the following facts in his career, which may be given at once, before proceeding to deal with the antiquarian questions connected with the slab.¹

He is first heard of in 1470 as captain of the castle of St. Peter, that is to say of the great fortress that was built by the Rhodian

¹ The authorities for the statements which follow are, in addition to other inscribed slabs, to be described later:

Giac. Bosio, *Istoria della Sacra Religione di S. Giovanni Gerosolimitano*, vol. ii (1630) pp. 322 A, B, 325 A, 328 B, 523 C-525 E, 541 D (who calls him 'Bossolx'); C. T. Newton and R. P. Pullan, *History of Discoveries at Halicarnassus*, &c. (1863), vol. ii, pt. ii, p. 665; Brit. Mus. Add. MS. 30993; J. Delaville Le Roulx, *Les Archives de l'Ordre de l'Hôpital dans la Péninsule Ibérique* in *Nouvelles Archives des Missions Scientifiques et Littéraires* iv (1893), p. 270; G. Gerola, *Il Castello di S. Pietro in Anatolia ed i suoi stemmi dei Cavalieri di Rodi* in *Rivista Araldica* (1915), pp. 1-10, 67-78, 216-27.

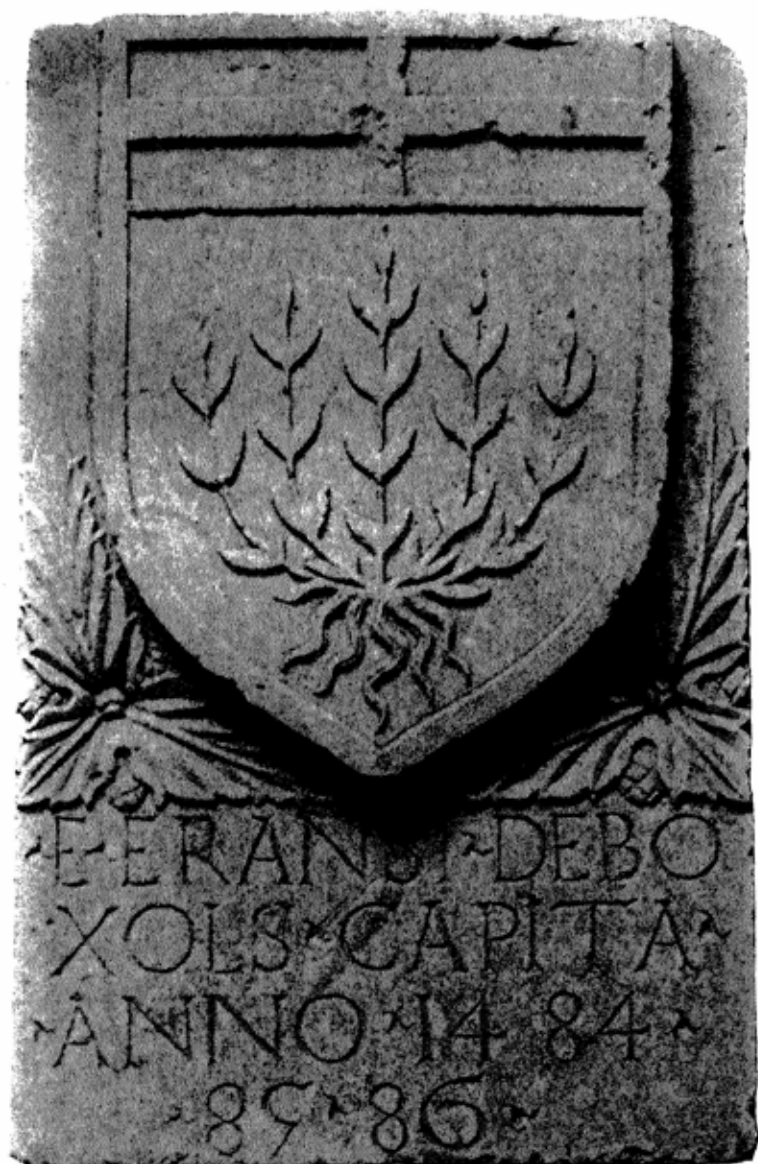


Fig. 1. ARMORIAL SLAB OF A HOSPITALLER FROM THE CASTLE OF
ST. PETER AT BUDRUM



Knights on the mainland at Budrum (Petronion), the ancient Halicarnassus. In October of that year he came to Rhodes, and on the strength of his report it was decided on the 26th of that month to send fresh munitions of war, provisions, and building materials to the castle. He was still or again in Rhodes in 1471, and in this year he obtained more reinforcements in view of suspected treachery among the garrison; and he was still holding the command in 1472. Of a second period of command in the same place we know no more than that it lasted from 1484 to 1486. In 1491 he became bailly of Majorca. For a third time we find him in the position of castellan of St. Peter's in 1494, and the inscriptions which record this fact mention his new dignity of bailly of Majorca. On 23rd July 1495 he was nominated by the Order to the priory of Catalonia. But the pope, Alexander VI, in defiance of a privilege granted to the Order by Innocent VIII, had already assigned this profitable benefice to his young nephew Luis Borgia. A serious dispute between the Order and the pope arose; the Order was scandalized and hurt in its feelings, especially, says Bosio, because its candidate was very old and decrepit.¹ It was decided to complain to all Christian kings and princes, and particularly to King Ferdinand the Catholic. A letter was dispatched on 26th May 1496, and the king interfered with effect (for a consideration); the pope withdrew his claim and Fray Francisco was placed in possession of his rights. After the dispute was settled Boxols himself was sent, on 6th September 1496, on a mission to the king. His age and feebleness did not prevent him from being appointed for the fourth time to his old command of St. Peter's in 1501, or from holding it until some time in 1502. But he presumably died in that year, for the appointment of his successor as prior of Catalonia, Bernardus Gelardi de Requesens, dates from 10th December 1502.

So much for his biography. Of his family I have been able to discover practically nothing. One N. Boxols is mentioned as having represented the city of Barcelona before the Archduke Don Philip on 17th January 1503 at Molin de Rey.² He may have belonged to the same family, as also may Ramón de Boxols, who is recorded³ as steward of the Duchess Doña Violante, wife of the Infante Don Joan, duke of Girona, in 1384; Bertus Augustini, silversmith of Perpignan, made a seal for him in that year. We may note in passing that the family name may be

¹ Il che era cosa di gran compassione; per essere il detto Bossolx vecchissimo, e decrepito. Bosio, ii, p. 523 C.

² N. Feliu de la Peña y Farell, *Anales de Cataluña*, iii (1709), p. 111. The name is spelt *Buxols* in the index to this work.

³ F. de Sagarra, *Sigilografía Catalana*, p. 88.

derived from the little place called Boyxols, near Tremp, in the province of Lérida. I am informed by Don Joaquin Miret y Sans that the name of Fray Francisco is written in documents *Boixols* as well as *Borols*. Another leading authority, Don Joseph Gudiol, remarks that the name is a diminutive of *boiros*, meaning *pequeños bojes*.

The career of Fray Francisco makes it clear that we must look for the source of the slab not at Rhodes, but at St. Peter's Castle. That fortress is extremely rich in such armorial monuments. The first attempt to deal with them was made by R. P. Pullan, who described the building in an appendix to Newton's History of his Discoveries at Halicarnassus; in the heraldic details he was assisted by the late Sir Richard Holmes. He mentions some sixty odd shields, and either he or some one else made a number of rough drawings of some of them, which, together with facsimiles of the very interesting graffiti in the refectory by Corporal Spackman, one of the sappers who worked for Newton, are preserved in the British Museum (Add. MS. 30993; mis-described as heraldry from Rhodes). In November 1892 Rear-Admiral (afterwards Admiral Sir Albert) Markham, who was second in command of the Mediterranean Squadron, visited the castle, and Captain (afterwards Rear-Admiral) Robinson took some photographs. In a communication to this Society,¹ Sir Clements Markham, who was his cousin's guest on the occasion, dealt with the heraldry of the English Tower. Admiral Markham himself subsequently published six of the photographs in an address to the Quatuor Coronati Lodge.² Finally, in 1914, the castle was visited by Signor Giuseppe Gerola, whose fine articles³ on the monuments of the knights in the Sporades mark a new stage in the study of the history of those islands. He went there on 16th February 1914, and left the same day; yet, during this brief visit, and in the face of discouragement by the Turkish authorities, he succeeded in making notes of some 255 shields and inscriptions: surely an extraordinary achievement.⁴ It is probable that several more remain unrecorded. Signor Gerola

¹ *Proceedings*, xiv, 281. I owe the reference to Mr. Mill Stephenson.

² *Trans. Quatuor Coronati Lodge*, vol. xvii, pp. 74-83 (1904). I owe it to the late Admiral Markham that I am able to refer to this publication. It is unfortunate that the details of the Boxols shield in his photograph are so obscure that it will not repay reproduction.

³ In the *Annuario* of the Italian School of Archaeology at Athens, vols. i and ii (1914, 1915). The heraldry of Rhodes receives special treatment by him in the *Rivista Araldica*, 1913-14.

⁴ His results are given in the *Riv. Araldica* for 1915 (see above, p. 6, note 1). His article on the castle in the *Nuova Antologia*, Nov. 1915, pp. 93-6, is for popular consumption. I have to thank Signor Gerola for his most courteous replies to certain queries addressed to him by me in connexion with the subject of this communication.

is able to make many corrections in Pullan's and Holmes's accounts; in condonation of some of their mistakes, it must be remembered that, so far as Pullan was concerned, his interest was chiefly in the architecture, and Holmes had to go on Pullan's notes and the drawings already mentioned. Now that peace has returned we may hope soon to have a definitive survey of the castle such as we already have for Rhodes. Meanwhile I propose to deal only with some points which arise in connexion with the armorial records of Fray Francisco de Boxols.¹

His captaincy was commemorated on the walls by slabs dating from all four periods. In the first period (1470-2) his coat is combined with another which is at present unidentified. In the British Museum drawings of this subsidiary coat the

¹ It is, however, worth while to put on record here the identifications of two English coats, by Mr. Mill Stephenson and Col. Croft Lyons respectively. Signor Gerola describes the first (pp. 224-5) thus: 'Di . . . allo scaglione dentato di . . . accompagnato da tre bisanti (o tortelli) di . . . posti due in capo ed uno in punta. Ha il capo dell' Ordine.' It occurs on the sinister side of a group of which the centre is occupied by a shield with the coat of Pierre d'Aubusson (or, a cross ancré gu.) as cardinal quartering the cross of the Order, and the dexter by a shield bearing a cross (presumably of St. George) in a garter. This seems to indicate that the group of shields was put up by an English castellan. It is dated 1498 (Gerola prints 1493 in one place, 1498 in another, but informs me that his notes confirm the latter). In the British Museum MS. the roundels are drawn as roses, but such a mistake is easily made if a stone is worn. Two roses are also drawn below the shield in the garter. The description by Pullan (p. 653) agrees with the drawings. Now Mr. Mill Stephenson points out to me that Sir Thomas Docwra, prior of the English from 1501 to 1527, bore: sable, a chevron engrailed arg. between three plates, each plate charged with a pale gu.; on a chief gu. a cross arg. We may therefore conjecture with reasonable probability that Sir Thomas Docwra was castellan of St. Peter's in 1498. [High Down in Pirton parish, Hertfordshire, was built by a Thomas Docwra about 1599, and here, inserted in one of the gables is a stone panel with the shield of Sir Thomas Docwra and date 1504. The shield has a chief of the arms of the Hospitallers, and below the inscription SANE BORO, which occurs elsewhere in connexion with the Hospitallers. See *V. C. H. Herts.* iii, 46.] Thomas Provana also held that post in 1498, perhaps succeeding Docwra later in the year. The second identification, which is due to Col. Croft Lyons, is that of the castellan of 1468. The shield is given by Signor Gerola (LXXV, 151) as 'Inquartato: nel primo e quarto di . . . alla gemella in banda di . . . racchiudente tre anelletti di . . . , nel secondo e terzo di . . . all' elmo di . . . , accompagnato da tre paia di zampe di . . . Motto: *Drede shame*'. Now, as Col. Croft Lyons points out, Dawnay bore: arg. a bend cotised sa., charged with three annulets of the field, and the motto TIMET PUDOREM. A photograph kindly sent me by Signor Gerola shows that the name engraved above the shield begins with D. William Dawnay was Turcopolier of the English from 1449 to 1468 (J. H. Round, *Peerage and Pedigree*, i, pp. 295 f.; Bosio, *Index s. v.* 'Guglielmo d'Aunay'). He was the son of Sir John Dawnay of Estrick and Ellen, daughter of John Barden (Brydges' *Collins*, viii, p. 454). Possibly the arms that he quarters are those of his mother.

charge which occupies the first and fourth quarters, when the arrangement is quarterly, or the base when it is per fess, is represented as a lion rampant, the other charge being a castle. But the draughtsman has evidently been puzzled by something which appears above the tail of his lion. If it were an ordinary lion, we should not be rash in taking the shield to be that of Leon and Castile. But from Signor Gerola's account, reaffirmed by him in a letter, and confirmed, upon close examination, by Admiral Markham's photograph, as well as by another from Signor Gerola's own camera, it is clear that the beast is winged. We have then a winged lion rampant or a gryphon segreant, or, as Signor Gerola calls it, a dragon rampant; the body and all four legs appear to be leonine, and Signor Gerola informs me that he now thinks it may be a gryphoir. It is unfortunate that a clear photograph seems to have been difficult to obtain. For the present we may call this coat the gryphon-and-castle coat.

In this first period, to return to the enumeration of the records, we have first (Gerola LXXX) a group of three shields, viz. that of the Order; on the dexter, the Orsini arms¹; and on the sinister the arms of Boxols quartering the gryphon-and-castle coat. Below is the inscription *f.f. de boxoll. 1471*.

Next come two instances from the next year, 1472. Of these one is recorded both by Gerola (LXXIV) and by the British Museum MS. (f. 31), and is also, fortunately, photographed by Admiral Markham (pl. IV of his Address). A shield quartering the cross of the Order with the Orsini coat is supported by the Blessed Virgin (on the dexter side) and St. Peter; below is a shield similar to that in the previous group, in which the Boxols coat is quartered with the gryphon-and-castle coat, quarterly; the supporters are the Magdalen and St. Catherine; and above, on a label, is the date 1472. The other example from this year is given by the MS. (f. 33). On this shield, Boxols impales the second coat in the form: per fess, in chief the castle, in base the gryphon; and there is the chief of the Order. Below is the date 1472; on the left, downwards, the inscription in a sort of Gothic lettering, *de boxols*, and on the right some lettering of the same kind of which the draughtsman could make little. Signor Gerola (LXXIII) describes what seems to be the same shield.²

Next in date comes the shield now in my possession, recording Boxols' captaincy in 1484-5-6. Pullan must have known of this slab, or of some other like it, for Holmes gives Boxols as captain

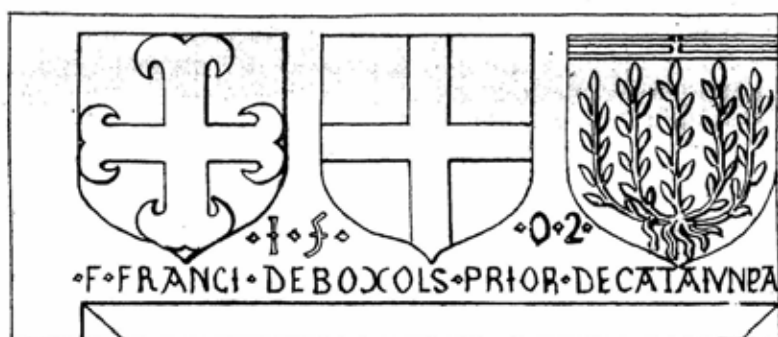
¹ For Giambattista Orsini, Grandmaster 1467-76. 'Bandato di rosso e di argento, col capo del secondo alla rosa del primo, sostenuto da una fascia diminuita di oro.'

² He informs me that the chief of the Order was accidentally omitted in his description of the shield.

in those years. Yet there is no drawing of this in the MS., and no mention of the shield itself in Pullan's text; nor does Signor Gerola record any other shield with the same date. It is possible that some of the drawings, once accessible to Holmes, were lost before the MS. was bound up.

Signor Gerola (LXXI) next gives the Boxols shield with the following inscription:

1494
C + A
+ TANII. DE. BOXOLLIS
BAILI. DE. MAIORCA



Wall adjoining tower A

Fig. 2. FROM BRIT. MUS. ADD. MS. NO. 30993, f. 39.

I take this, which is not very clear, to be possibly, though not certainly, the inscription which is given in the MS. (f. 11) in a form which is still less intelligible, although it suggests that the word which Signor Gerola gives as +TANII may really be the man's Christian name. A second shield describing Boxols as bailly of Majorca is given by both authorities (Gerola LXXX, and, much less completely, MS. f. 12) and has the date in Roman numerals, unfortunately mutilated. In Signor Gerola's reading (he describes it as uncertain) it runs:

F. FRANSIE. DE. BOXOL
BAILLVS. MAIORC
CAPTA. MCCCC

It is interesting to note the spelling of Franciscus with S instead of C, as on the slab of 1484-6. This inscription, though the date is mutilated, must be not earlier than 1491, when

Boxols became bailly of Majorca, and not later than 1495, since the priory of Catalonia (to which he was appointed in that year) could not be held in conjunction with the bailiage of Majorca, according to a decision of 1461, if I understand it aright.¹ We are surely justified in assuming the probability that the date of this inscription was also 1494.

Finally, the MS. (f. 39) records 'on the Wall adjoining Tower A' a group of three shields, the Order in the middle, flanked by d'Aubusson on its dexter and Boxols (with the chief of the Order) on its sinister side, the date 1502, and the inscription F. FRANCIS DE BOXOLS PRIOR DE CATALUNYA (fig. 2). From the chamber of this tower the MS. also gives some graffiti, among them the name *boxol*.

This completes the record.

Now a word as to the heraldry. It is not a thankful task to identify the botanical efforts of medieval heralds. Signor Gerola, in his article, cautiously calls the charge which Boxols bears 'una pianta'. It is extremely tempting to regard it as an example of canting heraldry and call it a box-shrub.² The Catalan name for this shrub is *boix*, even nearer in spelling to Boxols or Boixols than the Spanish *boj*.³

It is perhaps idle to speculate about the owner of the gryphon-and-castle coat which Boxols quarters or impales in the first period of his captaincy. Signor Gerola suggests to me that it may belong to the mother, or some female ancestor, of Boxols, or to some fief with which he was invested in his native country. Quite apart from the fact that the animal is not the lion of Leon, the coat cannot be that of Spain; for Boxols would hardly commit so gross a breach of heraldic etiquette as to put his own coat in the first and fourth quarters and the arms of his country in the less dignified position.⁴ What is more, the

¹ Cited by A. Campaner y Fuertes, *Cronicon Mayoricense* (1881), pp. 175-6.

² I am however bound to quote Dr. A. B. Rendle, who says that, though the leaves in box are opposite each other in pairs on the stem and have unbroken edges, the whole *facies* of the representation is against the identification. He thinks that the herald meant to convey an annual, at any rate an herbaceous plant, not a woody shrub. The design suggested to him (without any preconception of its appropriateness to the Order) St. John's Wort. I understand that Signor Gerola and Don Joseph Gudiol both accept the identification of the charge as box, *buxus sempervirens*.

³ I cannot think, judging by the drawing in the MS. (f. 8 = Gerola XIX, cp. LXXVII and LXXVIII), that another Budrum coat with three flowering plants has anything whatever to do, as Signor Gerola has suggested it has (p. 224), with that of Boxols, and I am glad to learn that he has now given up this view. The owner of this coat was in office in 1469, just before Boxols.

⁴ Signor Gerola notes that where two shields are grouped together, the greater dignity occupies the dexter position; if there are three, the

Spanish knights belonged to the Langue of Aragon, and would therefore have used the Aragonese coat, and not that of Leon and Castile. The priors of Catalonia used on their official seals a shield of the cross of the Order impaling the arms of Aragon: 'le prior de Catulia bulla de cire vert, la meite seyal del rey d'Aragon, el altre meytet l crois'.¹

With regard to the workmanship of the slab itself, I have already said that the lettering is apparently the work of an Italian hand. The forms of the numerals are characteristic of the period in Italy and in Rhodes; but in any other country they would be, to say the least, unusual.² The blunders in the spelling will not surprise any one who has been through the inscriptions from the castle of St. Peter's. Three-armed stops are found occasionally in other inscriptions of the period and neighbourhood; for instance, at Rhodes, in the epitaph of Rayner Pot, dated 1498.³ Although the whole effect of the slab is very decorative, and in admirable taste, the handling of the plant on the shield itself is not so spirited as the foliage ornament at the base of the shield. This decoration (if I may be excused for labouring a somewhat minute detail) perhaps deserves a word of comment, for it is by no means common in connexion with shields in Renaissance sculpture of the fifteenth century. It is, indeed, a survival from the century before. It was an obvious form of decoration for a Gothic artist to use when he placed his shields in square or oblong panels, as in the tomb of Cardinal Latino Frangipane (died 1294) in the Minerva at Rome.⁴ The same treatment is seen in the monument of Cardinal Ricciardo Petroni (died 1314) by Tino di Camaino in the Duomo at Siena,⁵ or in that of Guidotto de' Tabiati (died 1333) by Goro di Gregorio of Siena, in the cathedral at Messina (fig. 3).⁶ Tino di Camaino, again, uses his foliage in the same way to fill the space between the shield and the tops of the arches, in the spandrels of which the shield is placed, in the monu-

greatest dignity is in the middle, the next on its dexter flank, and so on. A similar rule would surely apply in the case of quartering or impaling.

¹ Statutes of the Order, thirteenth century, quoted by J. Delaville Le Roux, *Mélanges sur l'Ordre de St. Jean de Jérusalem* (1910), no. iv, p. 4. Two such seals are illustrated in the same volume (no. xv, pp. 12, 13), dating from 1355 to 1421 respectively. I owe the reference to Mr. Edmund Fraser.

² I may refer to the tables in my *Development of Arabic Numerals* (Oxford, 1915) for proof of this statement.

³ Gerola in *Annuario Sc. At.*, i, p. 235. Compare the four-armed form in an inscription of Emery d'Amboise of 1512 (*ibid.*, p. 242), and both forms in an inscription of 1511 on the Auberge de France (*ibid.*, p. 280).

⁴ G. S. Davies, *Renaissance Tombs in Rome* (1910), at p. 16.

⁵ Venturi, *Storia dell'Arte Italiana*, iv, p. 265, fig. 190.

⁶ *Ibid.*, p. 360, fig. 260.

ment of Tedice Aliotti (died 1336) in S. Maria Novella.¹ A particularly rich example is furnished by the monument of the Cardinal Fra Marco, in San Francesco at Viterbo (he died in 1358). Numerous other examples could be enumerated from monuments of the fourteenth century in various other places in Italy, such as Pisa, Milan, Verona, Bologna, the shield being sometimes flanked in the usual way, sometimes laid on foliage. But the most successful example of the treatment is also the latest that I have found in Italy, in the course of what has been, it is true, a rather 'perfunctory search':² this is the shield of England on the beautiful tomb of the English Cardinal Adam



Fig. 3. FROM THE MONUMENT OF GUIDOTTO DE' TABIATI (DIED 1333), AT MESSINA.

Easton in Sa. Cecilia in Trastevere (fig. 4). Easton died in 1398, and the tomb may date from a few years later.³

Thus at any rate the majority, if not all, of the instances of this fashion in Italy belong to the fourteenth century; the fifteenth-century artists turned as a rule to other forms of shield which lent themselves to different methods of framing. But the stonecutters employed by the knights in the Aegean were, as we might expect, not sculptors of a high order. When

¹ *Ibid.*, p. 270, fig. 194.

² Since the above was written, Signor Gerola tells me that the motive is very common in Venetian territory, and that he has also noticed it in Crete, as for instance at Apessokari. My search has been necessarily confined to the more important monuments, such as have found their way into books of reference.

³ Venturi, *op. cit.* vi, p. 59 (attributed to Paolo Romano, about 1397). G. S. Davies, *op. cit.* pp. 44-6, thinks it Sienese work, and some years later than 1398.

they attempt ornament, it is not surprising to find an occasional survival of an old fashion. Of the use of foliage in question, besides the present slab of 1486, there is an example, of rather rude workmanship, at Sklavià in Chios, with an inscription fixing the date to 1427 (fig. 5).¹ Possibly there are others at Budrum;

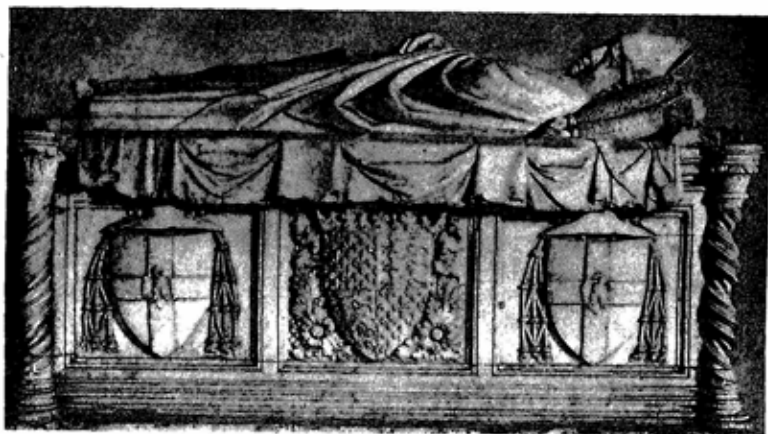


Fig. 4. FROM THE MONUMENT OF CARDINAL ADAM EASTON (DIED 1398) IN SA. CECILIA IN TRASTEVERE.



Fig. 5. SLAB OF ANTONIO DE BOZOLO, 1427, AT SKLAVIÀ IN CHIOS.

but nothing of the kind is to be seen in the published photographs of the monuments in Rhodes. What is interesting in

¹ F. W. Hasluck, *Latin Monuments of Chios* in *Annual of British School at Athens*, xvi (1909-10), p. 179 '1427 die prima Madi hoc opus fieri fecit Antonius de Bozolo pro se et suis eredibus'. I have to thank the Committee of the School for the loan of the block of fig. 5.

the present example is that, although the fashion is some eighty years out of date, it is used with the intelligence and taste which are normally to be found in even the most modest works of Italian decorative sculpture of the fifteenth century.

The CHAIRMAN expressed the indebtedness of the Society to the author for a paper full of information. The heraldry was of special interest and showed the influence exercised by the knights in those parts and the esteem in which they held their own position. The slab had been traced to a Sussex dealer, but there was nothing to show how it came to England.

H. SWAINSON COWPER, Esq., F.S.A., read the following paper on Wood Carvings at Hawkshead and Grasmere:

The photographs which lie on the table, six in number, represent an oak panel in my possession, and a series of five smaller panels belonging to Mr. G. Murray Wilson, of Dale End, Grasmere. There is no connexion, beyond a similarity of date, between the two exhibits. The single panel I bought at Christie's in the last Red Cross sale, to which it was presented by Mr. Basil Dighton, of Savile Row. It is 33 in. by 21 in., and the subject is the Fall, with Adam, Eve, and the serpent. It is divided into three arched recesses separated by columns, with Adam as usual on the spectator's left, Eve on the right, and in the centre the serpent of the Lilith type, with female human body, who glides from the branches and places the fruit in Eve's hand. In the spandrels above are the four winds, represented as cherubic heads blowing, and each arch has a bovine head as a keystone.

The design and workmanship are good, and the treatment of the two human figures and the serpent remarkable. Adam's head, with masses of clustered curls in hair and beard and noble aquiline features, is possibly intentionally in contrast with the type of Eve, whose rather heavy features almost suggest a negroid type. The sinuous movement of the Evil One as he glides towards Eve is carefully studied from the true movement of a reptile. The delicate detail on the shafts of the columns is also of very good character.

Mr. Dighton tells me that the panel when obtained in England was fixed on the top of a court cupboard of later date. It belongs to the first half of the sixteenth century and is, I think, the work of a foreign artist, either French or Italian, working in England. If this is so, it is an important example of work of this period and it would be very desirable to trace its history. There was, I believe, at Cartledge Hall in Derbyshire an oaken fire-surround which included a carving of this subject, and as this

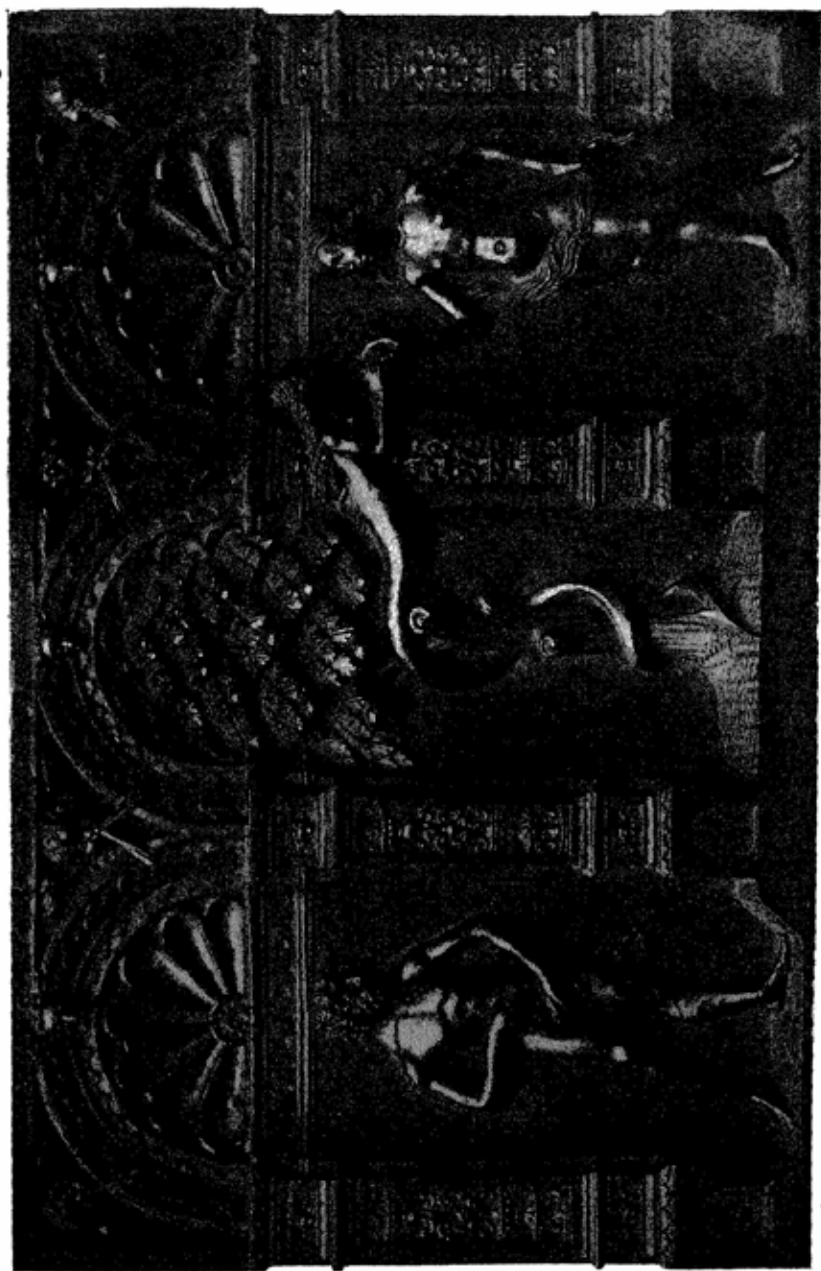


Fig. 1. OAK PANEL AT HIGH HOUSE, HAWKSHED



Fig. 2. THE PRODIGAL SON. PANEL NO. 1



FIG. 3. THE PRODIGAL SON. PANEL NO. 2



Fig. 4. THE PRODIGAL SON. PANEL NO. 3

house contained fine sixteenth-century work, I should be glad to hear if any Fellow can say if there were any points of resemblance. I am inclined to think that my own panel was originally framed in the woodwork of a manor house fire-place.

I have great pleasure also in exhibiting, through the kindness of my friend, Mr. G. Murray Wilson, of Dale End, Grasmere, photographs of five very remarkable carved oak panels in his possession. These carvings form part of the fittings of an oak room in his residence, of which the history and description are given in the following notes communicated to me by him.

The whole of the carved oak in this room was bought by me, in one lot, in 1896 from Morgan Williams, Esq. of Aberpergwm Hall, Neath. Mr. Morgan Williams informed me that it had been in his family for several generations and that previously it was in an ancient house in Swansea, which was owned by the ancestors of Oliver Cromwell, whose family name was originally Morgan Williams. A branch of the family removed to Buckinghamshire and took the name of Cromwell.

Regarding the details of the work, as now arranged in the room at Dale End, the most notable feature is a series of five elaborately carved panels, representing scenes in the parable of the 'Prodigal Son', but the costumes worn by the Jewish characters are of the period of Henry VIII, and this dates the work as early sixteenth century. The medallion heads in other parts of the room are undoubtedly of this period. This is corroborated by Mr. Small's book on the antiquities of Stirling, in which four panels are given which came from the palace at Stirling, and their date is known to be 1520. The actual panels are now in the museum at Stirling, and are identical in style and measurements with the medallion panels at Dale End, and there is no reasonable doubt that they are of the same period, if not indeed carved by the same artist.

The following are the details of the five panels representing the story of the 'Prodigal Son':

Panel no. 1, 15 in. by $6\frac{1}{2}$ in.¹—In this the father is paying over his portion to the younger son, who wishes to travel and see life. In the centre, the father is seated at a table, holding a money bag in his right hand.

Standing at one end of the table is the younger son, who has just received his portion in a bag, which he is handing to a companion or servant.

On the father's right is a standing figure, presumably the elder son, with his left hand on the father's shoulder. At the other end of the table is a seated figure, probably the steward or lawyer, who is making an entry in a book.

Panel no. 2, 18 in. by $6\frac{1}{2}$ in.—'Temptation'. Here the Prodigal is being enticed by three women elaborately and richly dressed. On the left is a woman with a large flagon of wine in her right hand, and a cup in her left, which she is offering to the man. He appears to be in an attitude of doubt and wavering, and rather resists the enticements of a second woman, who has taken him by the left hand, and with her right hand seems to be removing his cloak. A third woman has possessed herself of his hat, and with her left hand beckons him to come up a stair into a house, which is rather quaintly indicated at the end of the panel.

¹ In each case the carved part is measured. There is 1 in. to $1\frac{1}{2}$ in. uncarved round it.

Panel no. 3, 18 in. by $6\frac{1}{2}$ in.—'Riotous Living'. Here the Prodigal has given a free rein to his desire to 'see life'. He is seated on a bench near a table, and on his knee, in scant costume, is one of the women of the previous panel. She has just relieved him of his purse and is handing it to a musician seated at the end of the table. The Prodigal holds a goblet in his right hand, and is turning towards a woman who is pouring wine into the goblet, unaware that meantime he is being robbed of his purse. A subsidiary figure carries a second flagon of wine and another is about to place some dishes on the table.

When I came into possession of the panels, the goblet in the right hand of the Prodigal was gone, but the base remained, and there was no difficulty in supplying the missing part of the cup, although its modernity is obvious. In panel no. 2 the goblet and the left hand of the beckoning figure are also restorations.

Panel no. 4, 24 in. by $6\frac{1}{2}$ in.—Herding the swine and eating the husks. This is a double panel, showing in the first part the Prodigal, still fairly well dressed, leaning on his staff, with a rather chastened expression of face, tending the swine. At the right-hand end of the panel the Prodigal is in rags, without shoes, on his knees, eating the husks which he has taken from the swine's trough.

I think that originally there must have been another panel, showing the reconciliation with the father, but this is wanting.

Panel no. 5, 19 in. by $6\frac{1}{2}$ in.—This represents the killing and skinning of the fatted calf. Here there are two sections as in panel no. 4. In the first the calf is held by its horns by one man, while another aims a blow at its forehead with an axe. The second division of the panel represents the skinning of the calf. There is a second figure (imperfect) whose function I have not been able to make out. This is the least notable of the five panels, but the carving is bold and free, and the attitudes of the figures very life-like.

The medallion heads around the room, of which there are forty-six, are full of character and interest, but I have been unable to form any opinion as to the personages they represent. There are heads of all sorts and conditions, nobles and dames, warriors, priests, and clowns, but I find no kings or queens among them. These panels are of varying quality of workmanship and evidently of various periods.

The mantelpiece is rather a conglomerate structure, composed of many pieces of fine work of various periods and styles. On the right and left are massive figures of St. Paul with his book and sword, and St. Peter with his key, almost life-size, and carved from solid blocks of oak. Beside each figure is an elaborately carved, twisted pillar, entwined by vines and grapes, of excellent workmanship and probably of Italian origin. Over the fire-place opening there are very interesting carvings representing various hunting scenes, and on the over-mantel are five medallion heads, with a centre-piece of heraldic work in gold and colours.

Over a side door are two very quaint figures, one clearly representing the Virgin and Child, and the other a female saint, but they seem to have no connexion with the rest of the carved work, and indeed, on cleaning them, I found that they were carved in white wood, and I was obliged to stain them brown, to correspond with the oak of the room.

There are many other details of excellent carving in the room, but they seem to have little or no connexion one with another, and the conclusion I come to is, that the most important parts of the work, the 'Prodigal Son' panels and the head medallions, are of date 1520 or so, and the remainder are the result of the collection of good old oak carving of various periods



Fig. 5. THE PRODIGAL SON. PANEL NO. 4



Fig. 6. THE PRODIGAL SON, PANEL NO. 5

made by an ancestor of Mr. Morgan Williams of Aberpergwm and fixed up by him as the clothing of his hall. I got a plan of the hall where the oak had been fitted, and built the billiard room to take it.

Mr. F. P. Barnard, F.S.A., formerly of St. Mary's Abbey, Winderemere, an expert in heraldry, examined the oak carving in 1899 and sent me the following armorial notes:

The coat of arms (over the mantelpiece)—gules, 3 chevrons, or, is I have no doubt meant for that of Williams of Aberpergwm, Glamorganshire, the chevrons being gilded by a mistake of the painter, perhaps. They should have been argent. The chevrons are apparently carved as couped (i.e. not extended to the margin of the shield), but this I think is not intentional, and loose armory of this kind is not uncommon in heraldic carvings. This family of Williams was originally known as 'de Aven' (the coat of Williams, alias Cromwell, is—gules, 3 chevrons, argent, overall as many lions, rampant, or). The other coat, I noted, is that of Einion ap Collwyn, and is quartered by the above Williams family, with the metals and tinctures specified; it is sable, a chevron between 3 fleur de lys, argent.

Elsewhere, I noticed a Paschal Lamb. A Paschal Lamb proper (i.e. in its natural colours) is the crest of the same Williams of Aberpergwm, but from the way in which it appears in the carvings, it must have been inserted there as a badge; for in those days it would have been bad armory to display a crest alone by itself, as is improperly done nowadays. The same object is not uncommonly found both as crest and as badge. The horse and the stag, I expect, are also Williams, or Einion ap Collwyn badges.

I feel we are much indebted to Mr. Murray Wilson for permitting the exhibition of the photographs of these wonderful pieces of carving. They are works of high artistic merit, and from the proportions of the figures and the vigour and action expressed, are probably of German origin. However, the details of costume, arms, furniture, musical instruments, and vessels should be studied.

Their small size is noticeable. I suggest they may have formed the sides and top of a coffer. They are now under glass and the backs cannot be examined.

On the subject of their history I am not qualified to express any opinion. It is, of course, the case that Oliver Cromwell's great-grandfather was Richard Williams, who rose to fortune under the protection of Thomas Cromwell, Earl of Essex, and adopted the name of his patron. The father of Richard was Morgan Williams.

The CHAIRMAN, in thanking both exhibitors, expressed the opinion that the first panel was a fine piece of work showing continental influence, probably Flemish, and the others did not appear to be of English origin. Morgan Williams was familiar, but any connexion with Cromwell was at least unexpected.

Mr. W. H. Fox stated that Thomas Cromwell, Earl of Essex, had a sister who married Morgan Williams and had one son,

Richard Williams. That nephew of Thomas Cromwell was one of the active agents in the dissolution of the monasteries, and in 1539 changed his name to Cromwell, becoming afterwards Sir Richard Cromwell. He received considerable properties belonging to the monastic bodies, amongst others the nunnery of Hinchinbrooke, near Huntingdon, which accounted for the family of Oliver Cromwell, his great-grandson, being settled in Huntingdon.

Thanks were ordered to be returned for these communications.

THURSDAY, 28th NOVEMBER 1918.

Sir MARTIN CONWAY, Knt., M.A., Vice-President,
in the Chair.

G. C. DRUCE, Esq., F.S.A., read the following paper on the Legend of the Serra or Saw-fish:

Among the more important marine creatures described and illustrated in the mediæval Bestiaries is a beast called the Serra or Saw-fish. It is the subject of a moralized tale. Its legend is a simple one, but not without its picturesque side, and is noteworthy for the little variation that we find in its principal features. It is, however, quite otherwise in respect to the way in which the Serra is illustrated, for it would be hard to find any creature treated by artists in more diverse fashion, and it is frankly evident that none of them knew what it was like, if indeed it was to be seen in the flesh at all.

The story is told in most versions of the Bestiary: Greek, Latin, French, Italian, Arabic, Armenian, and Ethiopian; but for our purpose a translation will suffice of one of the Latin manuscripts in the British Museum, MS. Sloane 3544, of early fourteenth-century date, with such small adjustments as the texts of other manuscripts may suggest.

‘There is a beast in the sea which is called a saw-fish, and has immense wings. When this beast has seen a ship making sail on the ocean, it raises its wings above the water and competes with the ship in sailing. (But when it has competed in sailing or racing against the ship) for 30 or 40 furlongs, being unable to sustain the exertion, it gives up, and lowering



Fig. 1. SAW-FISH. MS. SLOANE 3544 (B. M.)



Fig. 2. SAW-FISH. MS. HARL. 3244 (B. M.)



Fig. 3. SAW-FISH. MS. 254 FITZWILLIAM MUS., CAMBRIDGE

uclato sit ut quidam uolūt q̄ inanes nung belias
 ent
 ta nungipati quia fertatam
 erat costam et sub'natans na
 it. Dencit a multitudine tenuum dicitur.



Fig. 4. SAW-FISH. MS. 22 WESTMINSTER CHAPTER LIBRARY

illuminat oem ipiem uenient in hunc mundum.



Et rāsal in mari qd dī ferra spinas hīs p̄se lōgio
 res rā uident naues uelificātes enatat ad eas en

Fig. 5. SAW-FISH. MS. SLOANE 278 (B. M.)



Fig. 6. SAW-FISH. MS. 14969 FR. BIBL. NAT., PARIS

its wings draws them in. And the waves of the sea carry it back again, tired out, to its own place in the deep.

'This beast (usual reading: Now the sea) is a symbol of this world. The ship is a type of righteous persons, who without peril or shipwreck of their faith pass through the midst of the storms and tempests of this world (and overcome the deadly waves, that is, the adverse forces of this world). But the saw-fish, that is, that beast which availed not to beat the ship in sailing, affords a symbol of those persons who at first eagerly engage in good works, but who afterwards do not persevere in them, and are led astray by faults of different kinds (that is, of greed, pride, drunkenness, and luxury), which toss them about as it were upon the waves of the sea and plunge them down to the depths of hell. For not to those who only make a beginning, but to those who persevere, is the reward promised.'¹

The miniature in the Sloane MS. (fig. 1) shows on the right a conventionally drawn ship, in which are seated two men in hooded cloaks, with their hands raised apparently in supplication. On the left is the saw-fish, drawn as an immense two-legged, winged dragon approaching the ship with open mouth as if menacing it. Its wings are raised to serve as sails, and are serrated on the edge in the usual way, but no part of the creature is described in this text as being like a saw.

As to the principal events of the story, viz. the saw-fish rising from the sea, racing with the ship, and sinking down again, there is very little to say. The earliest Bestiary (or indeed any manuscript) with which I am acquainted in which it occurs is MS. 10074 in the Royal Library, Brussels, dating from the latter part of the tenth century. One or both of two other Bestiaries at Berne are said to be as early, but these I have not inspected.² Farther back we cannot go, nor does there seem to be any allusion to such a story in any classical author, so far as I am aware, although the length of the race, 80 or 40 stadia, might perhaps provide a clue.

This difficulty as to source has the drawback that it leaves us uncertain as to the original motive of the saw-fish in racing with the ship. Was it merely rivalry due to jealousy, or was there a desire to harm the ship and crew? There is plenty of internal

¹ Cf. Matt. xxiv. 13. Among the Latin Bestiaries which have approximately the same text may be mentioned: MSS. 10074 Bibl. Roy., Brussels and 233 at Berne, of which transcriptions are given in Cahier's *Mélanges d'Archéologie*, vol. ii, p. 122; MSS. Harl. 4751 and 3244 at the Brit. Mus.; MS. 12 F xiii at Brit. Mus.; MS. at Sion College: and the version given in the Appendix to the works of Hugo de Sancto Victore, *De Bestiis et aliis rebus*, bk. ii, ch. 22 (see Migne's *Patrologiae Cursus Completus*, vol. 177, col. 69).

² Nos. 233 and 318 in Sinner's Catalogue.

evidence in the Bestiaries of an evil intention, but we do not know that it began there. It is more likely to have been already present, and would be natural in view of the reputed size and strange behaviour of the beast. Basil in his *Hexameron* tells us that whales were created to strike people with fear and astonishment, and that not only sword-fish, saw-fish, sea-dogs, and whales, but also the ray with its sting, and the sea-hare, are calculated to excite fear and terror.

However this may be from the point of view of the legend, there is definite evidence of hostility on the part of the saw-fish towards ships in another quarter, namely Isidore's *Etymology*,¹ where it is described as follows: 'The saw-fish is so called because it has a crest like a saw, and it swims beneath ships and cuts them.' This definition of Isidore was no doubt based on Pliny's accounts in bks. ix, 1 (2) and xxxii, 6 (2). In the first Pliny associates the saw-fish with the grape-fish, the sword-fish, and the cucumber-fish, as examples of forms found in the sea resembling not only terrestrial animals but also inanimate objects. In the second he mentions the sword-fish alone, as having a sharp-pointed muzzle, with which it is able to pierce the sides of ships and sink them. Isidore seems to have accepted this idea as applicable to the saw-fish, and gave it a serrated 'crest' to do it with. The word 'crista' is somewhat widely interpreted, and, whatever may have been Isidore's intention, his description was taken to mean a dorsal crest. Isidore is perhaps more quoted than any other author in the Bestiaries, and his description of the saw-fish passed into the texts of many manuscripts or otherwise influenced them. For instance, Vincent de Beauvais (*Spec. Nat.*, bk. xvii, ch. 127) reproduces it thus: 'The saw-fish swimming hidden beneath the ship cuts through its bottom, so that as the water rushes in, it drowns the crew by its crafty device and gorges itself on their flesh.' It had also a marked effect on the illustrations.²

The determination of the saw-fish to do harm to the ship is expressed more fully in the French than in the Latin versions. In the metrical Bestiary of Philip de Thaun, written about 1121, we get it thus:

Quant veit nes en mer halt. si se leve en halt.
A la nef fait grant laid. ke devant le nef vait
E si retent le vent. que ele nen ad nent.
Ne la nef entant deure de nent ne pot cure.³

¹ Liber xii, cap. 6.

² See MS. 12 F XIII (B.M.); MS. 22 Westminster Chapter Library; and MS. 254 Fitzwilliam Mus., Cambridge.

³ MS. Nero A v (B.M.):

When it sees a ship on the high sea it rises up.
To the ship it does great harm, for it goes before the ship



Fig. 7. SAW-FISH. MS. 14970 FR. BIBL. NAT., PARIS



Fig. 9. SAW-FISH. MS. 249 MERTON COLLEGE, OXFORD



Fig. 8. SAW-FISH. MS. VESP. A. VII (B. M.)



Fig. 10. SAW-FISH. MS. 249 MERTON COLLEGE, OXFORD



Fig. 11. SAW-FISH. MS. ROY. 2 B VII (B. M.)



Fig. 12. SAW-FISH. MS. ROY. 2 B VII (B. M.)



Fig. 13. SAW-FISH. MS. 10074 BIBL. ROY., BRUSSELS

And in the metrical version of Guillaume, of the first half of the thirteenth century:

Les mariners qui par mer vount.
Ne la querent ja encontre.
Quer cest un grant peril de mer.
Si fait sovent la nef perir.
A qy ele put avenir.¹

Other versions dwell more on the rivalry between the saw-fish and ship, and intimate that the saw-fish is very angry at being unable to beat the ship. In two of the French versions we read that 'when its breath fails, it is ashamed at being beaten, and exerts itself to the utmost to see if it can reach the ship'.²

Some variation is found here and there. For instance, in an Arabic version given by Professor Land,³ the saw-fish, which is called a dolphin, is said to take pity on a vessel when driven by a storm and in danger of sinking, and to raise its wings and pass beneath the ship and lift it above the waves. And it does this until it is tired. This is probably a late perversion of the story. In the Arabic version given by Tychsen,⁴ in which it is also called a dolphin, this phase is not mentioned.

Practically all manuscripts agree that when the saw-fish rises to the surface it sails or races through the waves and does not fly. The twelfth-century Latin Bestiary at Leiden, of which the text is given by Land,⁵ and the Arabic version by Tychsen, say that it imitates the action of ships, the latter adding that it 'rigs up a yard, as it were, with a sail, after the fashion of ships

And holds off the wind so that it gets none of it.
Nor can the ship all that time sail on at all.

Cf. Wright's *Popular Treatises on Science*, p. 104. MS. 249, Merton Coll., Oxford, reads: 'Ses eles leve en halt'—and 'kar devant le vent vaît', which is probably more correct.

¹ MS. Vesp. A vii (B.M.):

The mariners who cross the sea
Are not wishful to meet it;
For it is a great peril of the sea.
It often makes the ship to founder
To which it is able to get near.

See also M. C. Hippeau's transcription of manuscript at Paris, in *Le Bestiaire divin*, Caen, 1852, p. 202.

² Versions of Pierre and the Bestiaire d'Amour. Text of the former from MS. 3516, Arsenal Library, Paris, in Cahier's *Mélanges d'Archéologie*, ii, p. 121; of the latter in C. Hippeau's 'Le Bestiaire d'Amour', dated 1285, Paris, 1860, p. 39.

³ *Anecdota Syriaca*, vol. iv, p. 150.

⁴ *Physiologus Syrus*, p. 172.

⁵ *Anecdota Syriaca*, vol. iv, p. 47.

which set sails'. In the metrical version of Gervais, it expressly plays the rôle of a ship :

Quant ele voit par aventure
Nef coere contre les estoiles
Encontremont traites les voiles
Meitenant vers la nef sadrece
Ses ales estent come tref
De soi cuide fare une nef.¹

The words commonly used in the Latin manuscripts are 'contendit velificare vel currere', in Guillaume's version 'sile', in the Bestiaire d'Amour 'se saut parmi la mer', and in the Arsenal Library manuscript 'se lance parmi la mer'. In the manuscript of Thaun's version at Merton College it is said to have 'cles pur voler' and that it 'ses eles leve en halt', but it is clear from the context that this is not for flying, but for sailing. The saw-fish, on rising to the surface, puts up its wings and sets sail before the wind.

There is much discrepancy as to the length of the race. In the Latin manuscripts it is given as 'triginta vel quadraginta stadia'. This is evidently the original distance. The French and Italian versions vary. In the Arsenal Library Bestiary, of early fourteenth-century date, the text says that the saw-fish 'cort en coste la nef a estrif a eles tendues ben xl lieues ou c, a une alenee', i. e. 'sails side by side with the ship in competition, with wings extended, full 40 leagues or 100, without taking breath'. The manuscript of the Bestiaire d'Amour quoted by Hippeau is apparently based on the same original and uses similar words, but has lx instead of xl, due presumably to a copyist's error. In the later Italian versions given by Max Goldstaub² the words are 'zento meia', a hundred miles, so that the distance did not diminish as time went on.

All accounts agree that after its defeat the saw-fish suddenly sinks back exhausted into the sea, and some intimate that it is in a very bad temper. We noted that it was 'ashamed at being beaten', and one of the Italian manuscripts goes farther and says that it sinks to the bottom 'from the grief that it feels that the ship has escaped it'.³

¹ MS. Add. 28260 (B.M.); transcribed also by Paul Meyer in *Romania*, 1872, p. 440 :

When it sees by chance
A ship sailing against the stars (?)
With sails full set,
At once towards the ship it makes its way;
Its wings are as spread sails,
It reckons itself to be a ship.

² *Ein Tosco-Venezianischer Bestiarius*, Halle, 1892, p. 49.

³ Albertus Magnus says that when its wings are lowered it is carried down by its own weight (*De animalibus*, lib. xxiv).

So much for the legend. We will now consider the personality of the saw-fish, with particular regard to the way in which it is rendered in the miniatures. There are two main elements in its description: (1) That of the legend, that it is a sea-monster with immense wings, and (2) Isidore's definition that it has a crest like a saw. The artists had both to work upon. While there was a tendency to draw large sea-monsters such as the sea-tortoise and whale in the form of fish, this does not seem to have been so common in the case of the saw-fish. The word *belua* gave the artists plenty of scope, and as there was little or nothing in the legend itself about saws, it was open to them to treat the beast in any way they pleased. It is true that in the *Bestiaire d'Amour* and the Italian versions its wings are said to be 'sharper than razors', but this may be regarded as a bit of window-dressing.

In a fair number of manuscripts the saw-fish is illustrated alone, the ship being omitted, as in MS. Harl. 3244 (B.M.) (fig. 2). The heading in this manuscript is very explicit: '*De serra pisce magno pennas sive pinnas habens ad modum serre qua secantur ligna.*'¹ The artist has drawn the fore-part of a great scaled fish with a beast-like head, but despite the heading, has given it neither wings nor fins; on the other hand it has a fine row of saw-teeth along its back, due no doubt to Isidore's description. This saw-fish has three fish in its jaws, a feature which we also find in the Merton College manuscript, in Bodl. 602, and in the *Bestiary* at Sion College. There is nothing as a rule in the Latin texts to throw any light on this, but Thaun's *Bestiary* tells us that after its defeat 'it dives into the sea to devour the fish'; and this is made the subject of a symbolic lesson. The artists of the *Bestiaries* seem to have been quite ready to adopt details that they saw elsewhere, but which were not mentioned in their immediate texts. Both *Aspido Chelone* the sea-tortoise or turtle, and *Balena* the whale, are frequently illustrated swallowing fish.

Another instance of this type appears in MS. 254 Fitzwilliam Mus., Cambridge (fig. 3), where the saw-fish similarly has a fine row of teeth along its back. The text here is limited to Isidore's description, which it repeats word for word. In MS. Kk. 4. 25 in the University Library, Cambridge, of the same group, the miniature is on similar lines, and there is a quaint little illustration in MS. 22, Chapter Library, Westminster (fig. 4), which is interesting as showing not only the dorsal teeth, but also a large pectoral fin or wing. The text here again simply repeats Isidore.

The '*serrata crista*' was occasionally rendered in an original sort of way. The word *crista* is particularly applied to a cock's

¹ About the saw-fish, a great fish, having wings or fins after the manner of a saw with which wood is cut.

comb, and this seems to have been in the mind of the artist of MS. Sloane 278 (B.M.) (fig. 5), who has drawn his saw-fish more or less like a cock, with raised wings as it were 'in full sail'. Isidore's description does not come into the text of this manuscript; it is of the version of Hugo de Folieto and says that the saw-fish has '*spinas prope se longiores*'. These are nowhere to be seen, so that it appears to be a case of the artist disregarding his text, and either working off his own bat or from some picture that he was acquainted with. He has moreover put no crew on board, and the ship and saw-fish are approaching one another, which is hardly compatible with a race.

The words '*elevat alas*' or '*ses eles leve en halt*' no doubt suggested to some of the artists an association with flight, and there are miniatures which show the saw-fish as a bird. In the MS. of Gervais at the Brit. Mus. the text actually commences :

Dedenz la mer un oiseau va
Qui unes longues penues ha

but there is no miniature. In the manuscript of the *Bestiaire d'Amour*, illustrated by Hippeau, it appears as a bird flying above the ship, and in MS. 14970 Français (Bibl. Nat., Paris), Guillaume's version (fig. 7), the treatment is the same. For the most part, however, it is on or near the surface of the sea. In MS. Bodl. 602 the ship is in full sail with a crew of four men, three of whom are looking at a great water bird standing on the sea. It has a fish in its beak. In the second *Bestiary* in MS. Douce 88 (Bodl.) the saw-fish resembles a large bird coming up over the sea. There are three men in the ship variously occupied, one of whom is looking at it, and they seem to be frightened. In MS. 14969 Français (Bibl. Nat.), Guillaume's version (fig. 6), it is a composite creature, semi-bird, semi-fish, with raised wings, fish body and tail, and webbed feet, hovering over the sea. In MS. 1444 Français (Bibl. Nat.), Guillaume's version, the saw-fish is drawn as semi-bird, semi-dragon, and is flying.

It will be seen that we have now got quite away from Isidore's description, and are nearing the '*belua in mare*' of the legend. The saw-fish is also called *animal* and *piscis*.¹ The word *belua* naturally admitted the dragon form, as we saw in the Sloane MS. In Thaun's *Bestiary* the saw-fish is said to have the head of a lion and tail of a fish. In the manuscript of this version at the British Museum the illustrations are not filled in, but in the Merton College MS. there are two. The uppermost

¹ In the twelfth-century Greek *Bestiary* at Smyrna the word *κίτος* is used. For an account, with many plates, of this interesting manuscript see *Der Bilderkreis des griechischen Physiologus*, by J. Strzygowski, Leipzig, 1899. In MS. 318 at Berne the saw-fish is called a fish in both heading and text.



Fig. 14. SAW-FISH. MS. SION COLLEGE, LONDON



Fig. 15. SAW-FISH. MS. 3516 ARSENAL LIBRARY, PARIS

Scutas syrie que nunc tyrus dicitur. olim
 serra uocabatur a pisce quodam qui illic
 abundabat. quem sua lingua sar appellat
 ex quo derivatum est huius similitudinis pis-
 ciculos sardas. sardinas et uocari.



Fig. 16. SAW-FISH. MS. BELONGING TO PIERPONT MORGAN, ESQ.

(fig. 9) shows it as a two-legged dragon-like creature with dog's head, bird's wings, one of which is raised, and fish body and tail, standing on the sea. Three fish are swimming into its mouth. The illustration at the foot of the page (fig. 10) shows it similarly drawn, with raised wings, devouring fish. Other fish are poking their heads up out of the water, apparently to see what is going on. On right is a quaintly drawn ship with crew of seven men. In the Sion College Bestiary (fig. 14) the saw-fish is still more like a dragon, with beast's head, curled tail, and bird's wings. It has two fish in its jaws. In MS. 14964 Français (Bibl. Nat.), Guillaume's version, it appears as a hairy two-legged dragon, with raised wings, on the surface of the sea. In MS. Douce 132 (Bodl.), Guillaume's version, the saw-fish is a monster with both wings and fins, and an enormous mouth opened apparently to engulf the ship. There are two men on board who hold up their hands as in the Sloane MS. In the Bestiaire d'Amour in MS. 1444 Français the ship is without mast and sail, and in the sea below is a two-legged dragon with fish body and tail.

Once embarked on the beast form, there is no knowing where the saw-fish may stop. In MS. Roy. 2 B VII (B.M.), better known as Queen Mary's Psalter, there is an interesting series of Bestiary pictures on the margins, including two illustrations of the saw-fish (figs. 11, 12). It is drawn as a winged dog, its wings having prominent spines. In the upper illustration it is racing over the sea; in the lower it has apparently caught the ship, with dire results; for the mast is broken and the vessel unmanageable. The crew are gazing at the saw-fish in terror, and it certainly may be described in the language of Guillaume as 'un grand peril de mer'. In MS. Douce 167 (Bodl.) it appears as a four-legged griffin-like creature with large wings raised and long tufted tail, facing a ship with a crew of three men.

In view of its description as a fish we sometimes find it drawn that way, with either bird's wings or exaggerated fins, as in the Arsenal Library MS.¹ (fig. 15). The saw-fish is here below the ship. In the beautiful miniature in the Bestiary which is now the property of Mr. Pierpont Morgan (fig. 16), but which formerly belonged to William Morris, the reverse is the case, for the saw-fish is flying above the ship. It is drawn distinctly as a fish, but with its fins transformed into wings. Both saw-fish and ship are travelling the same way with a fair wind.² This manuscript dates from the latter part of the twelfth century, and has a curious bit of text, which differs altogether from the texts of other manuscripts. It

¹ Illustrated also in Cahier's *Mélanges*, vol. ii, pl. xix.

² I am indebted to Messrs. Bernard Quaritch for the loan of the plate in the catalogue of the Morgan manuscripts.

runs: 'The city of Syria, which is now called Tyre, was formerly named Serra from a certain fish which used to abound there. And this (fish) they called in their tongue "sar", from which it was deduced that little fish of similar appearance to it were called sards or sardines.' This piece also came from Isidore's *Etymology*,¹ but the scribe has written Serra instead of Sarra, the old name of Tyre. Presumably he confused the two names, and copied the wrong paragraph from the *Etymology*.

A further complication arose through confusion between the names of the Serra and the Siren, and the fact that a ship and crew appear in each scene. In several manuscripts we find the saw-fish represented as a siren or mermaid. This occurs in the early Bestiary at Brussels (fig. 13), where the miniature shows a siren with flowing hair holding up her hands and singing in the usual way, but there is this peculiarity that she has five wings attached to her right arm and hand and four to her left. Cahier suggests with some reason that the artist interpreted the words 'pennas in manes' as equivalent to 'pennas in manibus', i.e. wings on the hands. Her tail ends in conventional foliage. The ship is also conventionally drawn with animal-headed prow, raised stern terminating in foliage, mast, sail and oars, and a crew of four men all asleep, in accordance with the Siren legend.² There is no doubt that this miniature represents the saw-fish, as the Siren legend is illustrated farther on in the manuscript by three bird-sirens. In MS. Gg. 6-5, a fifteenth-century Bestiary in the University Library, Cambridge, the saw-fish is represented by an excellent siren with the usual mirror and comb. She has large bird's wings, and feathered or scaled body and tail which may be of either bird or fish.³

Then as another variant we find at times a harpy-like creature. There is a good miniature in MS. Vesp. A vii, where it is treated in a strange way (fig. 8). It has a bearded human head with dog's ears, and a feathered bird's body, with raised wings. Its legs are peculiar, for the left consists of a human arm and hand, which grasps one of the ship's stays, and the right a feathered animal-leg ending in a horse's hoof. The sea is rough and the vessel tossing. In the first Bestiary in MS. Douce 88 the miniature presents somewhat similar features. The saw-fish has the form of a harpy with dragon-like head and ears, feathered body, wings and clawed feet, with one of which it holds the ship down. It will thus be seen that there was enormous latitude allowed by the texts, and that the artists took full advantage of it.

¹ Liber xii, cap. 6.

² Illustrated also in Cahier's *Mélanges*, vol. ii, pl. xxiv.

³ Vincent de Beauvais includes the Siren and Serra under one heading, the account of the Siren coming first.



Fig. 17. (?) SAW-FISH, TYMPANUM. NETHERTON (WORC.)

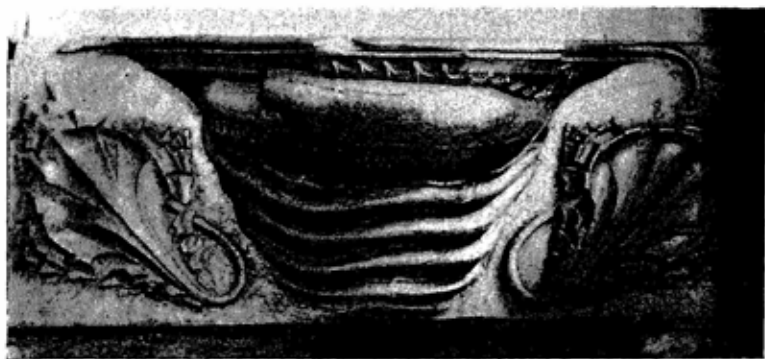


Fig. 18. SAW-FISH, MISERICORD. BISHOP'S STORTFORD



Fig. 19. SPINED FISH. BENCH-FRONT, BARKING (SUFF.)



Fig. 20. FISH WITH LONG DORSAL FIN. BENCH-FRONT,
GREAT GRANSDEN (HUNTS.)

The moral lesson founded on the saw-fish is twofold. The more usual form, as already mentioned, is given in the Sloane MS. The sea is the world, and the ship and crew godly folk who pass through its storms successfully; while the saw-fish signifies those who make a good beginning in well-doing, but who through lack of staying-power fall back into their old bad habits.

The theme is well rendered in Guillaume's version, which displays throughout a simplicity and sincerity of mind:

The sea is great and deep;
It signifies this present world,
Which is very bad and bitter
And perilous as the sea.
They who go sailing on the sea
Signify the good folk who be,
Who go voyaging through this world
And steer their ship straight on
Through the waves, through the storms,
Against the dangers and the winds.
This is the meaning to be understood,
They are the good folk whom (the beast)
Cannot catch nor cause to drown,
Who do not cease to battle.
Through this world go sailing
The good men, and steering
So straight that the fell adversary
Is not able to wreck them.
The beast of which I have told you,
Which sails over the sea a short way,
Then withdraws and sinks into the deep,
Signifies many who be,
Who begin by doing well,
By serving God and loving him;
And when they come in danger
Of great ease and of pleasures,
Of desires which are great,
And of the vanities of this world;
Then they give up steering straight;
Soon they meet with shipwreck
And fall into calamities
For their great wickedness,
Which draw them down to the depths below
Within the abode of hell.¹

In the version of Hugo de Folieto in MS. Sloane 278 and in Gervais the ship and crew are termed *apostolos*. Sometimes the lesson itself is illustrated. This is the case in the Early MS. at Brussels, in MS. 14969 Français at Paris, and in the Greek Bestiary described by Strzygowski. The miniature in the Paris MS. displays at the top clouds and a V-shaped enclosure, in which is a demi-figure of Christ with

¹ MS. Vesp. A vii. In the Arsenal Library MS. the passage in Matt. xxiv. 13 is introduced. In the version of Gervais the symbolism is on the same lines as in Guillaume.

cruciferous nimbus and right hand raised in benediction. On the left a monk is teaching a group of eight persons from a book, two of whom are mitred and one crowned, who attend and gaze at the figure of Christ. On the right is hell-mouth as a beast's head with open jaws into which a demon is pressing down a mitred ecclesiastic and two other men, one crowned. With his right hand the demon grasps another mitred ecclesiastic, who with three other men, two crowned, stand close by. On the left a robed figure is seated, with open book.

In the Greek Bestiary at Smyrna there is an ordination scene with altar, priest, and monks. The priest holds his hands over the head of a bearded man clad as a monk, who stands bent in front of the altar. Behind the monk are other monks, one of whom holds some scissors over his head, so that the tonsure is part of the ceremony. Elsewhere a bearded monk is addressing a group of tonsured men, and the legend *οἱ ἀπατῶντες*, the deceivers, is written opposite to them. A contrast is intended, and the lesson speaks of those who made a beginning with good service, but who have fallen back again into their former worldly ways.

The other form which the symbolism takes is that the saw-fish signifies the devil. In MS. 318 at Berne the moral runs as follows: 'The sea is the world; the ship is holy church in which are the people of God. The fish is the devil who changes himself into an angel of light that he may be able more easily to deceive unwary souls.'¹

In Thaun's version, in which the saw-fish tries to harm the ship by holding the wind off it, the devil similarly tries to deprive people of holy inspiration:

When they hear sermon and preaching,
They don't want to listen, they will interrupt it.
The devil does this to them; he withdraws the holy Spirit from them.
Therefore says the Lord God to his own truly:
They who are God's people hear the word of God—
There is hardly any mortal man, but who thinks well and ill;
When he has evil thoughts, then the saw-fish has caught him;
When man returns to good, the saw-fish cannot harm him;
When he cannot tempt the holy man, nor turn him to evil,
Then he plunges into the sea, to devour the fish,
That is he enters into the world, he takes men and confounds them,
Whom he finds in evil, in criminal sin;
As the saw-fish takes the fish; here ends the discourse.²

In the Italian versions the saw-fish is the devil who follows the good man with his temptations, but failing retires again into

¹ 2 Cor. xi. 14.

² MS. Nero A v; cf. Wright, *Popular Treatises on Science*, p. 104.

hell. One manuscript adds that the good man departs in faith to heaven, at which the devil is so enraged that he cannot contain himself: 'And for this reason may this fish be likened to the devil, because it is as swift as the devil, who is able to pass in a moment from one end of the world to the other.'¹

In the *Bestiaire d'Amour* the symbolism is wholly secular. This work is of an erotic character as its name implies, and consists of a love address by a gentleman to a lady and her reply, their sentiments being formulated upon episodes in the regular *Bestiaries*. The gentleman, after recounting the events of the legend, tells the lady that just like the saw-fish, there are lovers who will follow her as long as their breath lasts. Such a one is ready to do her will so long as it is not contrary to his own, but as soon as it is contrary he would not be sensible of a little ill-feeling towards her, to be hurt and make it up again, but he would give her up altogether because of his anger. 'In that case, I say, you are keeping to him, and he is not keeping to you. But still were you not keeping (to me), it is quite evident that I am clinging to you, because of the many times that you have provoked me at your mercy; and if I through provocation were to force myself to leave you, I should not be loving you so exceedingly as I do. But I love you and cling to you. Why, I should think to have lost you hopelessly, if a man can love what he never had, and so I shall not drift away elsewhere nor change you (for another) no more than the turtle-dove changes her mate'²

The lady in her reply demurs to his advances, and says: 'I see truly how much it means, and that I should have to act as if nothing might happen to me for which I should be blamed and want to hide myself; and when people would look a good deal at me, then all the more should I want to justify myself and flout those who might be ill-disposed, in order to cover my prank. Truly, by God! But in the end truth must needs prevail and put down my false wings, which would not be able to stand against the truth in the long run, any more than the wind can prevent the ship from ever keeping on its course, so long as there is water left for it.

'In the name of God, it is not possible to do such things nor to hide what such a thing entails. For one must recognize people's pride and life such as it is, whether good or bad. And so I mean that when I should no longer be able to hide my

¹ Goldstaub, loc. cit.

² This introduces the next subject. The legend of the turtle-dove declares that if the hen-bird has lost her mate at the hands of the fowler or the hawk, she laments him to the end of her life, and never takes another partner.

foolish venture, I should be just as abashed as the saw-fish which plunges down to the bottom of the sea'.¹

We will now see in what way the saw-fish may be represented in ecclesiastical carving. At the outset we are met by two difficulties, one being the extraordinary variety of form in which it is drawn in the miniatures, and the other the fact that one of these forms is a winged dragon. There are about twenty-five different creatures, mainly serpents and lizards, drawn as dragons in the *Bestiaries*, and this circumstance I hold to be an important factor in accounting for the multiplicity of dragons carved in churches. They really represent different kinds of serpents. But while we can identify them in the manuscripts by their titles and the texts, we are not able to do so in carving, except in a few cases where particular anatomical features appear, such as the asp with its tail in its ear, the basilisk with cock's head, and the amphisbaena with a head upon its tail; or where there are accessory elements in the scene, as the 'dragon' strangling the elephant, and the hydrus wriggling down the crocodile's throat. It is probable that the carvers did not concern themselves with the identity of the dragons they carved, but simply selected from the illustrations those which took their fancy. The saw-fish may have come in for its share of patronage either in dragon, fish, or even bird form. Positive examples are hard to find, and there is no recorded instance of the race; but there are certain carvings which are worth considering as perhaps representing the saw-fish by itself. The first is on a twelfth-century tympanum removed from the south doorway of the chapel at Netherton (Worc.). This building has long been ruinous, and used for farm purposes. When the tympanum was in position over the south doorway, a tree was allowed to grow up in front of it. The doorway itself had been much pulled about and made narrower by brickwork, and my friend Mr. F. T. S. Houghton of Birmingham thinks that the stone may have been originally over the north doorway, now lost. It is at present lying loose about the place (fig. 17).² The creature carved upon it certainly a dragon of some kind, and gives the impression of being in rapid motion. Its head is raised with its mouth open and breath visible; its wings are outspread, and its tail, which is very long, is returned over its back in a curve to harmonize with the curve of the tympanum. There are two incised lines near the bottom; the upper one is straight, the lower wavy. The straight line is evidently its body, the wavy line may be meant

¹ Hippeau's transcription and MS. Harl. 273 (B.M.) have been used. The latter gives the man's address only.

² Since the above was written, the property has been sold, and it has been taken away.

for waves; if so, the creature would be sailing. There seems to be some probability that it represents the saw-fish of the legend.

The next is carved upon a fifteenth-century misericord at Bishop's Stortford, and is quite different (fig. 18). It is certainly a fish, for close inspection shows it to be covered with scales. It has a fine row of saw-teeth along its back, a well-defined pectoral fin, and a mouthful of teeth. This I consider fairly represents the saw-fish, and that it was copied from an illustration based on Isidore's description.

There are other carvings of fish which may be mentioned. At Barking (Suff.) (fig. 19) there is a pair on a bench-front, which are spined and are swallowing small fish. These may perhaps be saw-fish in view of the prominent spined dorsal fin. At Great Gransden (Hunts.) there are two pairs on bench-fronts, both having some sort of dorsal fin (fig. 20). The first pair is swallowing fish. It is difficult to express an opinion as to their identity, as *balena*, *aspido*, and occasionally the dolphin are drawn as scaled fish, and the two first swallow fish. The second pair have blunt noses, and presumably are different fish. They may perhaps be intended for whales.

The only remaining point to be dealt with concerns the identity of the *serra* in nature. There is very little to be learnt from classical authors. Pliny's references have been given; they are based on information got from one Trebius Niger. It is to be noted that he puts the saw-fish next after the sword-fish, and this perhaps indicates that he had in mind a creature with a projecting blade such as the saw-fish of modern zoology, the *Pristis antiquorum*, which is native to the Mediterranean. The name *Pristis*, however, appears to be used by Aristotle and Pliny for an animal of the whale class, and Pliny joins it with *balena* in almost the next paragraph after his allusion to the *serra*, so that he evidently regarded it as a different creature. The etymology of the word *Pristis* has been the subject of discussion, but it seems to have been decided that where used by Aristotle and Pliny, it is derived from *πρήθω*, to spout, and not from *πρίω*, to saw; but in modern science the word *Pristis*, which literally means a sawyer, is attached to the saw-fish.¹

¹ Gesner has a long dissertation on the subject. Bochart (*Hierozoicon*, lib. i, ch. 7 and lib. vi, ch. 15) gives a description of the saw-fish from an Arab source, which says that it is as big as a mountain and has saw-teeth from head to tail, two cubits long, and like black ebony; but he regards it as fabulous. In the Italian Bestiaries the saw-fish is named Vergilio, due to the description of certain fish called the Vergiliades, which were found in lakes Como and Maggiore. Pliny tells us that they were to be seen only at the time of the rising of the Vergiliae (Pleiades) and that they were remarkable for the number of their scales, which

Other suggestions have been made as to the original of the saw-fish of the legend, such as the nautilus, the flying-fish, and the requin or whale which follows ships in shoals. Although a fish with large fins, which could be termed wings, was needed to suit the requirements of the story, it is possible that the idea of the race originated with some other creature, and was afterwards fastened on to the saw-fish. For instance Pliny, Aelian, and others tell us that the lolligines, or cuttle-fish, fly out of the water, and in such multitudes that they sink ships. But subject to any modification which might result from the unearthing of the source of the legend, I am disposed to favour the *Pristis antiquorum* as the hero of the tale. The size of its pectoral fins, which are certainly large and suggestive of wings to an imaginative mind, would suffice.¹ On the top of this we have Isidore's definition of its serrated crest, which may well be a misplaced description of its blade.

As to the source of the story, I am disposed to look for it in some classical author, for the classics were the happy hunting ground of the early ecclesiastical commentators in their zoological ventures. Somewhere or other there was a tale or even only an isolated event which caught the author's fancy, and which, when connected with the saw-fish, was deemed suitable for hanging a moral lesson upon; but where it is I cannot say.

The CHAIRMAN said the author had shown himself an expert on the structure and habits of the saw-fish and had communicated his knowledge in a learned and comprehensive paper. It was interesting to follow the workings of the medieval mind in that connexion: it was strongly attracted by such mythical beasts, and was content to go on describing and illustrating them without demanding a sight of the original. Even if the saw-fish had really existed, the medieval artist or moralist would have transformed it into a dragon, which every one believed in because *vir quidam probus* had seen one.

The Rev. H. F. WESTLAKE had noticed no omissions in the paper, and felt that Mr. Druce had exhausted the subject. He had brought with him one of the most interesting Latin bestiaries, richly illustrated, and a picture of the *serra* from that volume had been shown on the screen. There was evidently some comparison between the *serra* (sometimes spelt *certa*) and the *behua*, which occurred on the previous page. The bestiary strongly resembled hob-nails in appearance. This is repeated by Albertus Magnus.

¹ I am indebted to Dr. Harmer, F.R.S., for the illustration of the *Pristis* (fig. 21).

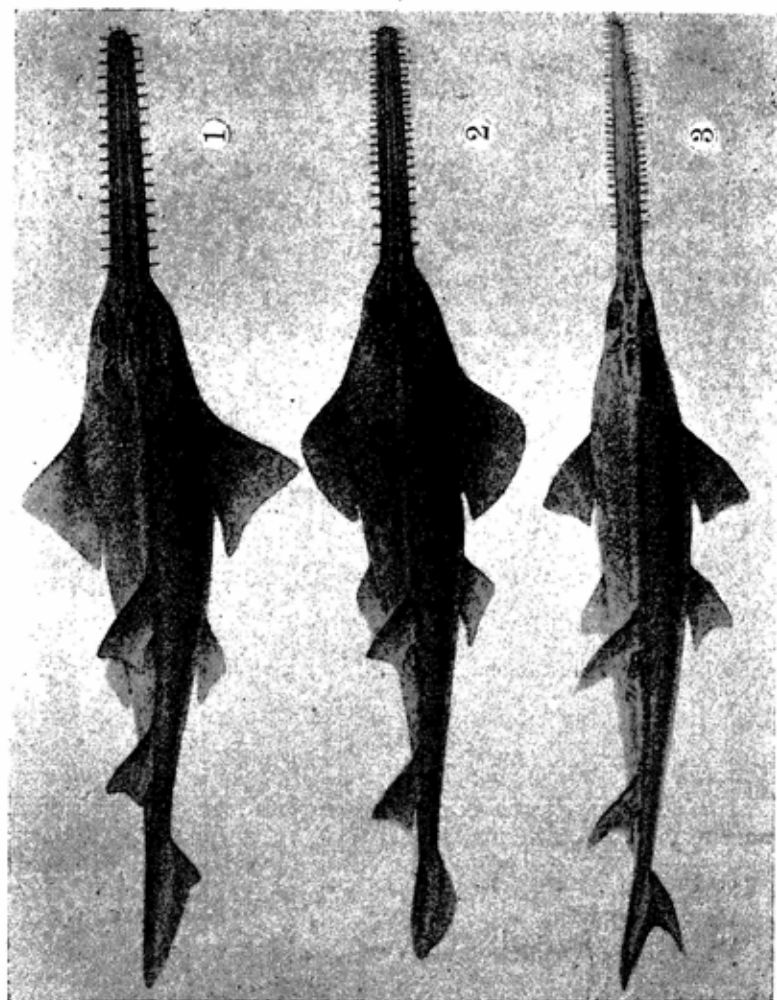


Fig. 21. *PRISTIS* (INDIAN). 1. *PERROTETI*. 2. *ZYRON*. 3. *CRSPIDATUS*.

artist and writer had a good deal to say about ordinary quadrupeds, but in the fish section only dealt with the very large and very small, omitting altogether the ordinary species. The manuscript in question only contained one sermon, which had the *belua* for its text. *Pristis* had been mentioned as a synonym of *serra*, and was also written *pristix* and *pistrix*, the last name occurring in the *Aeneid* iii. 427 (*Scylla immani corpore pistrix*). A curious variety of fishes was illustrated in the manuscript, that above the *serra* being a sword-fish equipped also with a shield.

Thanks were ordered to be returned for this communication.

An invitation from the Dean and Chapter of Westminster for the Society to inspect the coffin of King Edward the Confessor on Wednesday, December 4th, before it was put back in the shrine whence it had been removed three years ago, was read from the Chair.

THURSDAY, 5th DECEMBER 1918.

WILLIAM PAGE, Esq., Vice-President, in the Chair.

Notice was given of the ballot for the election of Fellows to be held on Thursday, 16th January 1919, and the list of candidates to be put to the ballot was read.

The following letters were read :

Bemerton Lodge,
Salisbury,
4th December 1918.

DEAR SIR,

I beg most gratefully to acknowledge the receipt of your letter of the 22nd November.

Will you please convey my thanks to the Society of Antiquaries for their kind and sincere expression of appreciation on my presenting Stonehenge to the nation. Coming as it does from that learned Society the Antiquaries of London, this is most

welcome to me, and the thought that I have earned the approval of those to whom Stonehenge is dear is most pleasing to me.

I hope now that Stonehenge belongs to the nation, your Society will be given facilities to excavate and thus learn much that is undiscovered about the old monument.

I am, Sir,

Your obedient servant,

C. H. E. CHUBB.

C. R. Peers, Esq.,

Secretary,

Society of Antiquaries of London,

Burlington House,

Piccadilly,

London, W.

The Astor Estate Office,

Victoria Embankment, W.C. 2.

3rd December 1918.

DEAR SIR,

I am desired by Viscount Astor to acknowledge the receipt of your letter of the 26th ultimo, and to beg you to express to your Society his grateful thanks for their kind appreciation of his efforts (unfortunately unavailing) to secure Stonehenge for the nation.

He is glad to know that the monument has, through the generosity of another, been secured for the nation and will remain public property for all time.

I am,

Yours faithfully,

JOHN COODE ADAMS.

The Secretary,

Society of Antiquaries of London,

Burlington House,

Piccadilly, W. 1.

The following resolution was moved from the Chair, seconded by Lieut.-Colonel Croft Lyons, and carried unanimously:

'The Society of Antiquaries of London takes pleasure in placing on record its gratitude to the Dean and Chapter of Westminster for their kindness in giving the Fellows the opportunity of seeing the coffin of Edward the Confessor before it was finally closed to view, and its appreciation of the friendly services of Canon Westlake in describing the shrine to the assembled company.'

WILLIAM DALE, Esq., F.S.A., Local Secretary for Hampshire, read the following paper on the discovery of two pigs of de-

silverized lead at the Roman station of Clausentum in Hampshire:

The Roman station of Clausentum near Southampton is now largely built over, the manor house and garden, which occupied the centre, being almost all that remains uncovered with houses. A tract of land close to the river has recently been sold for the erection of engineering works, and in making foundations for a shed on the line of the wall which marked the limit of high



PIGS OF LEAD FROM CLAUSENTUM: SIDE VIEWS OF BOTH, AND UPPER VIEW OF LOWER.

tide in Roman times, two pigs of lead were found at a depth of 2½ ft. The weight of the larger is 178 lb. and of the smaller 166 lb. Both of them are inscribed in relief on the top and on one side, the lettering being done in the casting,

IMP VESPASIAN AVG
BRIT EX ARG VEB

There are in addition some incuse letters of smaller size done after casting which are difficult to make out, but which seem to be NOVEG and SOC NO. One pig is numbered VI and the other VIII.

The subject of lead-mining in Britain by the Romans in the first and second centuries has been ably and exhaustively dealt with by our fellow Professor Gowland, F.R.S., whose paper is printed in vol. lxvii of *Archaeologia*.

The paper contains a list of pigs found in this country and the inscriptions upon them. The only other discovery of the kind in Hampshire that I am aware of is the pig found at Bossington in 1783 on the line of the Roman road to Venta Belgarum or Winchester. This bears the stamp of Nero, and his titles are so fully set out on it that it is possible to date it at the end of A.D. 60. There are also some letters upon it which Dr. Haverfield identifies as the seal or stamp of the officer who passed the ingot.

The destination of this pig was evidently Winchester. There was a Roman road from here to Clausentum, and the present discovery suggests that there was a shipment of this metal from Clausentum to Gaul, or straight to Italy. The place of origin, it is almost certain, was the lead-mines in the Mendip hills.

The lettering on the Clausentum pigs affords much room for speculation. The smaller and obscure letters, I venture to think, may be the stamp of the passing officer.

The VEB which occurs on both in the main inscription on the side no one has yet been able to expand or explain. Dr. Haverfield, however, calls my attention to two pigs found in Somerset which have, in the same position, VE and V. ETB, thus giving us three varieties of the same thing. In the Clausentum specimens the letters VEB are continuous, and there is no stop after V. as in V. ETB.

The researches of the students of Roman Britain may probably identify the word as a place name.

The CHAIRMAN thought that Mr. Dale's example might well be followed by other Local Secretaries, who had been requested by one President after another to report their activities. It was clear that the British lead-mines belonged in Roman times to the Crown, and that most of the ingots came southward from the North Midlands.

Professor W. GOWLAND said the two Roman pigs of lead had been rightly referred to the Roman mines in the Mendips, as the inscriptions on both were identical with those on a pig found at Charterhouse in the immediate neighbourhood of the mines, except that VE or VI was written instead of ERG.

Altogether over 50 Roman pigs of lead had been found in England, of which 45 occurred near or not far distant from the mines—22 were in the mining region of Flintshire, 5 in that of Shropshire, 7 in the Mendip region, and 11 in Derbyshire.

Only 9 had been found at places far distant from the mining districts.

One near Bossington (Hampshire) which had the same chemical composition as one from Flintshire, and hence had had its origin at the mines in that district.

One at Hunt's Common (Staffordshire) having DECEANGI as part of its inscription; therefore it must have come from either the Flintshire or the Shropshire mines.

One at Brough (Yorkshire) not far from Hull, with the same inscription as that on a Derbyshire pig.

Four at Pulborough (Sussex) on which the letters LVT formed part of the inscriptions; therefore they must have been cast in Derbyshire.

Two at Clausentum, as just described by Mr. Dale, from the the Mendips.

As regards the inscription EX ARG, which he thought should be read *ex argentariis*—‘from the silver works’—he might say that some years ago, through the courtesy of Sir Hercules Read, it was his privilege to be permitted to make complete chemical analyses of all the Roman pigs in the British Museum, eleven in number. He found that all, with one exception, were extremely poor in silver, and that there was practically little or no difference between those bearing the inscription *ex arg* and the others without it, in their content of the precious metal.

The silver in the pigs marked *ex arg* ranged from 12.6 dwt. to 2 oz. 13 dwt. per ton.

The silver in the pigs not so marked ranged from 14.4 dwt. to 2 oz. 6 dwt. per ton.

The exceptional pig was one from the Mendips and even this contained only 8 oz. 6.6 dwt. per ton.

In this connexion he would point out that the ores of lead in Britain, except in the Isle of Man, where they were not worked in Roman times, were all poor in silver but rich in lead, and hence although the Romans doubtless obtained very large quantities of lead from this country they could have got but little silver.

Mr. GARRAWAY RICE inquired whether the pigs were built up in layers or cast solid.

Professor GOWLAND said that stratification was noticeable in one place (as shown on the screen), and the pigs were not run out of the furnace into a mould but ladled out, so that the layers did not solidify all at the same time.

REGINALD A. SMITH, Esq., F.S.A., read the following paper on flint implements from the palaeolithic ‘floor’ at Whipsnade,

Bedfordshire, exhibited by T. W. Bagshawe, Esq., and A. E. Smith, Esq.:

In fulfilment of a promise to the late Mr. Worthington Smith I have to communicate to the Society a few notes bearing on his excellent diagrams and drawings of the worked flints found by himself at Whipsnade, Bedfordshire. The exhibits, which include all the illustrated specimens, have been kindly provided by his son Mr. A. E. Smith and by Mr. T. W. Bagshawe, the fortunate possessor of part of the collection.

What follows should be regarded as a continuation of the paper on the palaeolithic 'floor' published in *Archaeologia*, lxvii, 49; and it is interesting to find that the deposits and implements from four sites where the same 'floor' has been exposed, correspond in all essential details, and furnish us with a homogeneous industry that can be brought into close relation to the geological sequence.

The Whipsnade pit (marked on fig. 1) is $2\frac{1}{2}$ miles south-west of Caddington church, and close to Black Hall, which is in Kensworth parish, Hertfordshire, and only a hedge divides this outcrop of the palaeolithic floor from that county. The height is 600 ft. above Ordnance datum and 166 ft. above the river Ver, which rises about half a mile to the east, and for some distance runs along the Watling Street. A section taken along the curved line A-B of fig. 1 is given (fig. 2), showing the extent to which the valley has been excavated since the brick-earth was deposited on the higher ground, for Mr. Worthington Smith was convinced that the spreads of brick-earth at Gaddesden Row, Caddington, and Round Green at one time formed with the Whipsnade deposit a continuous sheet over a wide tract of country. Details are given in the following table:

Site.	Above O. D.	Above neighbouring rivers.
Round Green	530 ft.	178 ft. above Lea.
Caddington	595-530 ft.	250-185 ft. above Lea.
Gaddesden Row	544 ft.	{ 184 ft. above Gade (1 mile).
Whipsnade	600 ft.	{ 144 ft. above Ver ($2\frac{1}{2}$ miles).
		166 ft. above Ver.

It will be noticed in this section that the palaeolithic floor slopes from Whipsnade and Caddington towards the Ver, suggesting a shallower valley at the time the brick-earth was laid down. This slope seems to be verified by wells and other deep borings, and might be taken to show that the Ver has only cut down another 30 ft. since palaeolithic times. But since man lived on the brick-earth surfaces, there has been a glacial deposit on the high ground that probably levelled up the valleys to the same height, so that the entire valley would have

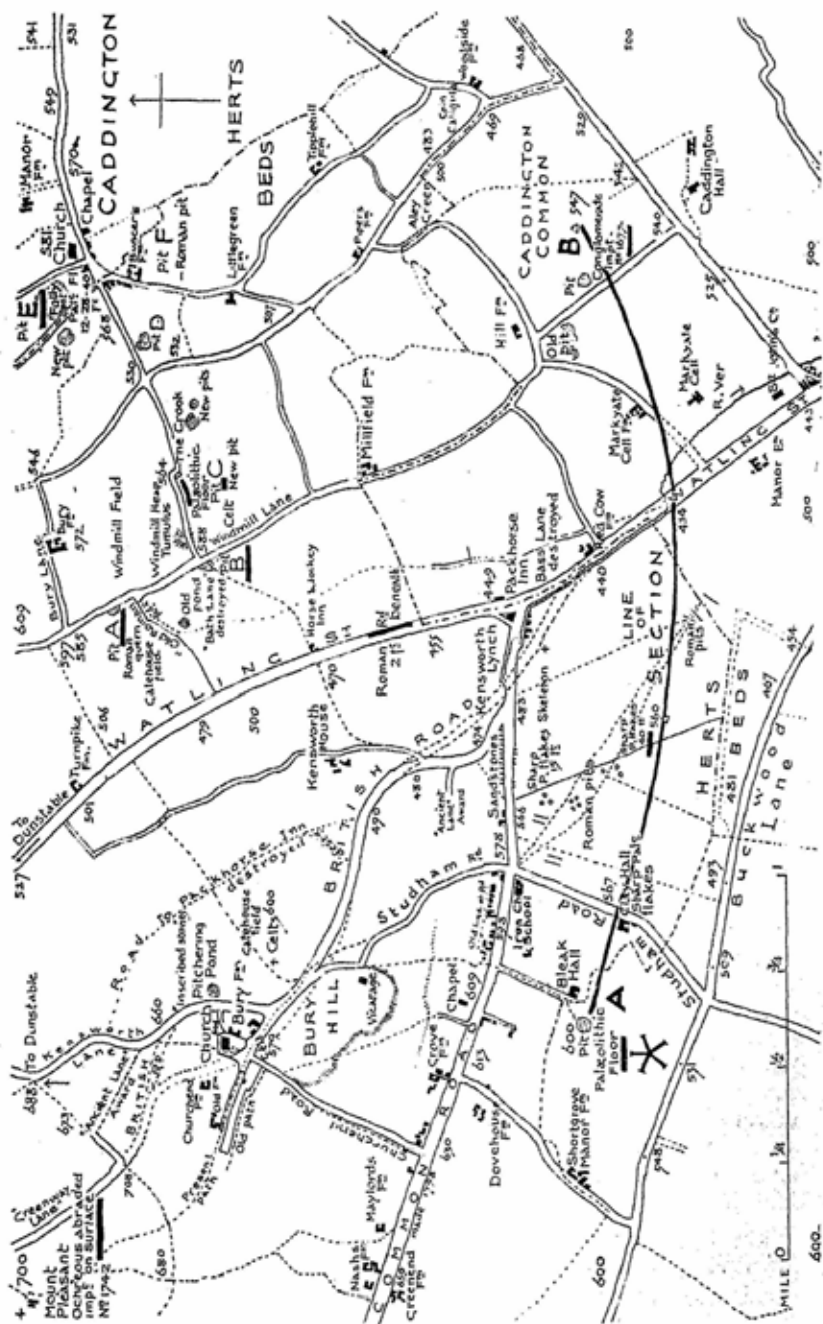


Fig. 1. DISTRICT OF CADDINGTON AND WHIPSNADE (S.W. ANGLE), WITH SITES MARKED.

One section (fig. 4) shows a pipe in the brick-earth extending 12 ft. below the surface and filled with the contorted drift, Tertiary pebbles, etc., that normally cap the brick-earth. Another on the road between Whipsnade Heath and Dunstable Downs shows, under Tertiary deposits, an horizon of chalk with large flints and red clay that may have provided raw material for the palaeolithic flint-workers. The flint occurs in large nodules, much cracked and often deeply stained with oxide of

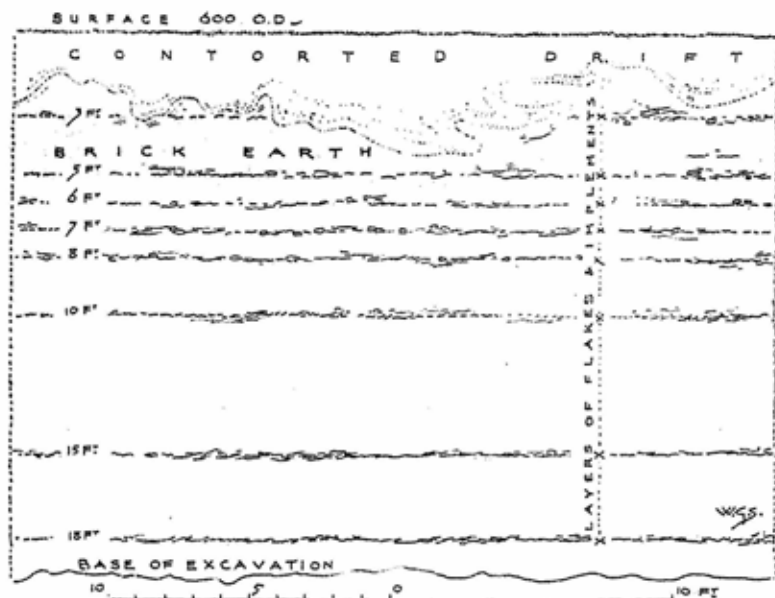
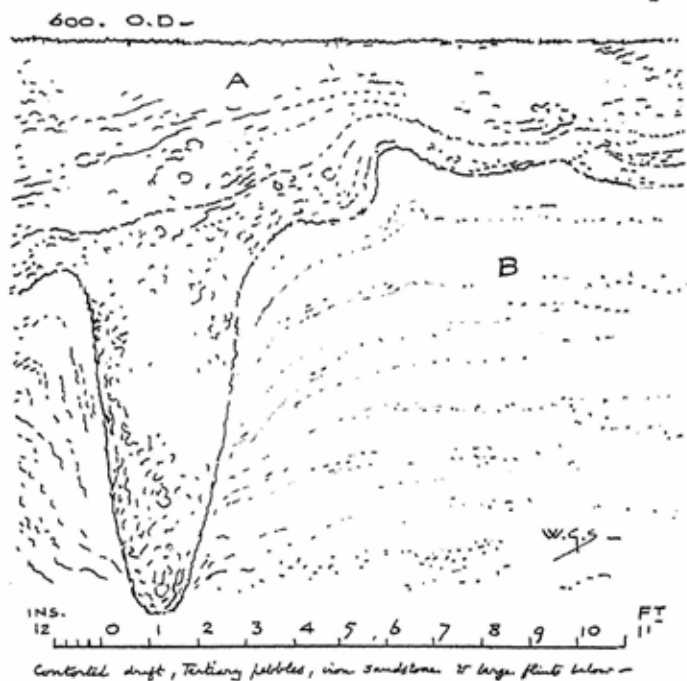


Fig. 3. PIT-SECTION AT WHIPSNAD, SHOWING A CONTORTED DRIFT ABOVE BRICK-EARTH.

manganese, about 3 ft. from the surface, and slight local denudation would have laid the nodules bare on the surface.

The depth of the solid chalk from the surface varies in different excavations from 3 ft. to 20 ft. and the brick-earth above it was deposited in horizontal layers forming land-surfaces on which palaeolithic man settled from time to time, leaving behind him implements finished and unfinished, and flakes forming the debris of his chipping-sites, obviously undisturbed, as in some cases they can be fitted together again (fig. 5). Above the brick-earth is generally found in this neighbourhood a contorted drift or unstratified deposit of red clay with flints, many of these being worked, and patinated in various shades of ochre.



[Fig. 4. PIT-SECTION AT WHIPSNAD, SHOWING PIPE IN BRICK-EARTH.

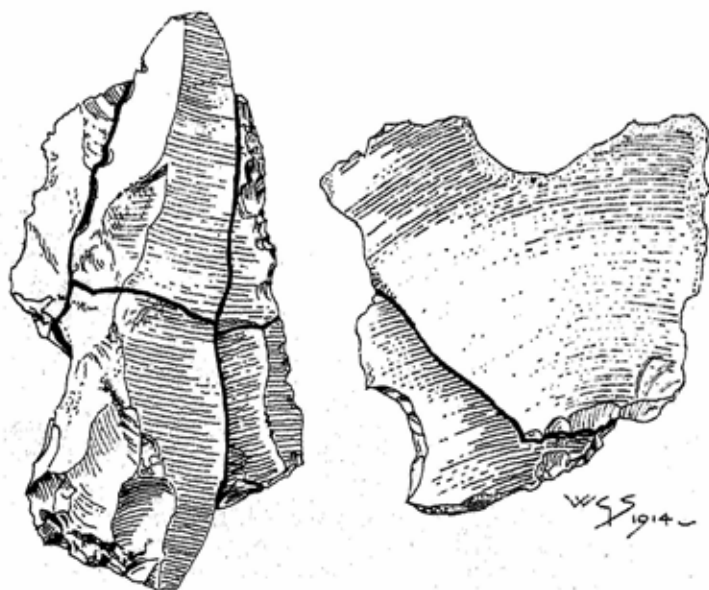


Fig. 5. EXAMPLES OF RECONSTRUCTED FLINTS, WHIPSNAD (3).

At Whipsnade Heath this drift has a varying depth of many feet, and contains flints of large size, large blocks of iron sandstone, often tabular, pieces of soft red friable sandstone, and other material.¹

Mr. Worthington Smith had ample warrant for supposing that what he called the contorted drift was due to ice-action, which brought from a distance boulders and ochreous implements that formerly lay on the surface, the flints there acquiring the patina that is often associated with the plateau.² There



Fig. 6. OVATE IMPLEMENT FOUND AT 15 FT., WHIPSNAD (3).

are many ochreous flakes from Whipsnade, most with the peculiar white markings commonly seen on plateau specimens, and the contrast to the brick-earth implements is very striking. In spite of their colour and rolled condition, the flakes and implements from the contorted drift are older than the creamy white specimens found several feet below them, as is proved incidentally by the discovery in the brick-earth at Caddington of a re-chipped ochreous implement from the red-clay drift. Few will quarrel with the conclusion that there was considerable ice-action (whether it can be called a glaciation or not) after the implements of palaeolithic man who lived on the spot were sealed up in the brick-earth.

The three specimens exhibited by Mr. A. E. Smith are of excellent workmanship, the deepest being a small ovate with a contraction below the rounded point (fig. 6). It was found at

¹ *Man the Primeval Savage*, p. 82.

² See, for example, *Proc. Prehist. Soc. E. Anglia*, ii, 404.

15 ft. from the surface, and has sharp edges and a dull surface, with white crust on a large part of both faces, the chipped surface being grey. There is a cutting-edge all round, and the side-edges are rather zigzag. Another implement, found at 7 ft. from the surface, has a creamy patina and lustrous surface

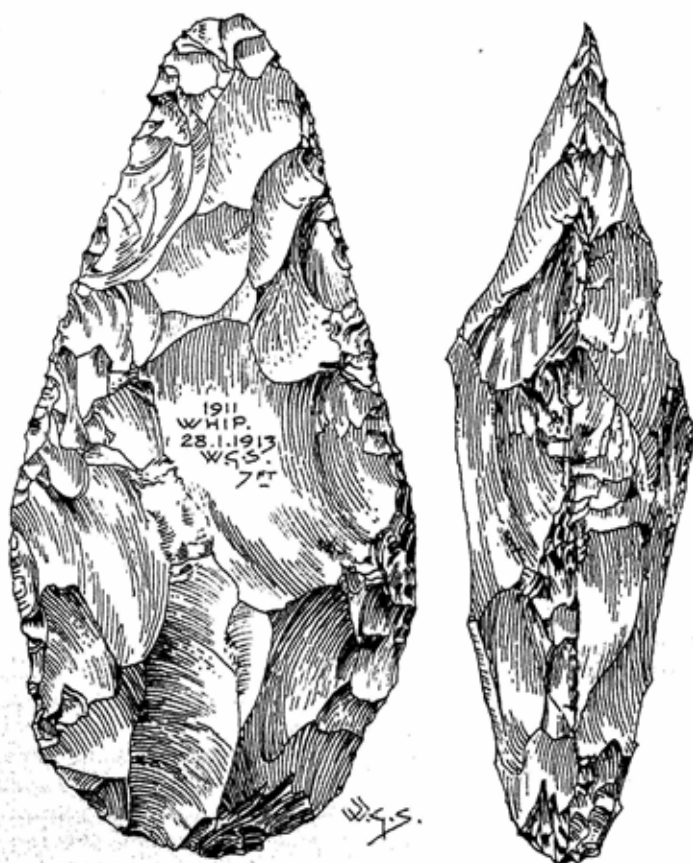


Fig. 7. POINTED HAND-AXE, FOUND AT 7 FT., WHIPSADE (2).

with an indigo patch on both faces (fig. 7). It may be described as a pointed hand-axe, and but for its occurrence well up in the brick-earth, 8 ft. higher than the preceding ovate, might well have been attributed to the early drift; but the heavy butt ends in a sharp edge, and the side-edges are straight, the point being very thin. The third is a fine ovate (fig. 8), evidently of St. Acheul type, with rather a basil point. The patina is

creamy to brown, pinkish in places, and there is a sharp edge all round except in the middle of one side, where a patch of white crust remains. The side-edges are nearly straight, and the surface quite dull.

Three of Mr. Bagshawe's exhibits are here figured, the deepest being a chalky-white chopper, found at a depth of 5 ft. (fig. 9). It has a good deal of white crust and is lustrous in places, with

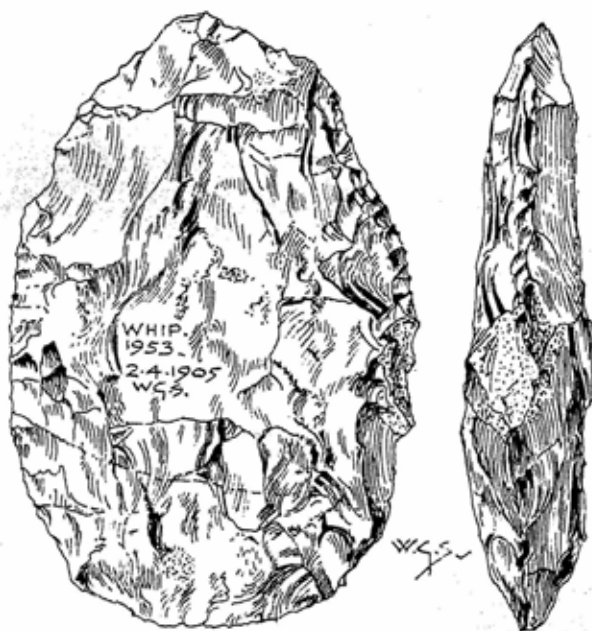


Fig. 8. OVATE IMPLEMENT WITH BASIL POINT, WHIPSADE (3).

dulled edges. Two feet higher was found a large implement (fig. 10), apparently unfinished, the whole of one face being a natural fracture. It is patinated grey and brown, with a good deal of yellow crust remaining. The third (fig. 11) is a thin indeterminate implement flaked on both faces. It was made from a flake, now dove-coloured, and is slightly used on one edge. At the angle indicated is a small facet showing an earlier ochreous surface, hence the raw material probably came from the red-clay, which was subsequently brought from higher ground and sealed in the brick-earth deposits of this site.

Some others in the same collection are worthy of mention, especially a fine ovate with dark mottled patina and sharp edge all round except for a crusted hollow at the side, and at one end

where there are three spurs strikingly similar to a Grime's Graves specimen (*Report on Excavations*, p. 177, fig. 53). It is 3.7 in. long and was found at a depth of 18 ft. (no. 1943 in catalogue). A long pointed oval (4.6 in., no. 1935) is yellowish creamy, lustrous in places, with an indigo patch on one side-edge. Both sides are twisted rather in the S form, the ends are imperfect, and the symmetry of the faces spoilt by a lump that has defied repeated attempts at removal. No. 1954 is a cordate implement



Fig. 9. FLINT CHOPPER FOUND AT 5 FT., WHIPNADE (#).

with white chalky patina, lustrous in places: the flaking is bold and the side-edges wavy (4 in. by 3.2 in.). Somewhat of the same form but thinner is no. 1955, which is dark brownish grey, with some crust on both faces. There is a crusted edge at the butt; the sides were meant to be straight, and the point approaches a basil. L. 3.5 in.

So large a collection of implements from this palaeolithic 'floor' has now been made that it should be possible to fix the chronology of the brick-earth, and by inference that of the contorted drift also, by analysis of the forms represented and by comparison with other localities. There are a few types that,

occurring apart, might have been attributed to an earlier phase of the palaeolithic, but there are many unmistakable specimens of the ovate of St. Acheul and the side-scraper of Le Moustier. Though a sequence is not out of the question, it looks as if those who occupied the surface of the brick-earth from time to time belonged to the transition period when the ovate and pointed core-implements were going out of fashion and the flake-

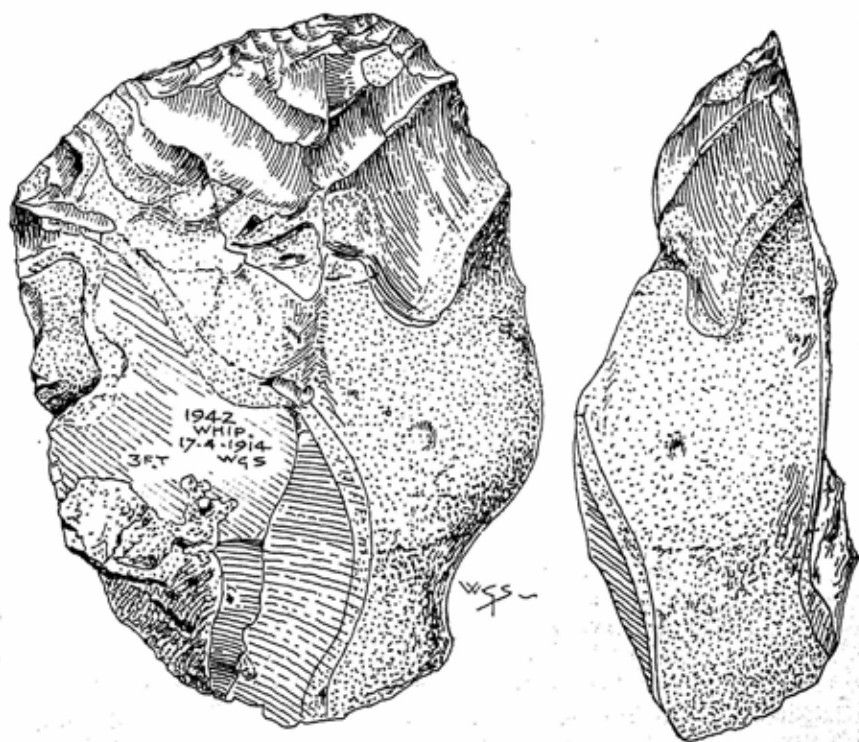


Fig. 10. UNFINISHED IMPLEMENT FOUND AT 3 FT., WHIPSADE (3).

implements of the early Cave-period were coming in. In the Dordogne this period would correspond to La Micoque, which is characterized by implements with slender point and one flat face, the ridge running to the point not quite along the central line.

In conclusion, it may be mentioned that the bulk of Mr. Worthington Smith's collection passed years ago into the British Museum (where his catalogue is now deposited), and a

part was purchased by Dr. Allen Sturge.¹ Of his more recent accumulations, a few specimens were retained by his son, Mr. A. E. Smith, and the remainder disposed of to Mr. A. Bagshawe, of Dunstable, who made the purchase on his son's behalf, and to Mr. E. Franklin, mayor of Dunstable at the time, to form the nucleus of a museum for the town. This will keep green the memory of one who, by patient study of the district chosen for the home of his later years, rendered notable service to prehistory, and to other branches of British science.



Fig. 11. WORKED FLAKE WITH EARLIER OCHREOUS SURFACE AT ANGLE (A), WHIPSNADE (B).

REGINALD A. SMITH, Esq., F.S.A., read the following paper on a polished flint implement of palaeolithic type, exhibited by Major G. T. Poole; and a celt of Cissbury type with palaeolithic patina, exhibited by B. Lowerison, Esq.:

When I had the honour on 18th April of bringing before this Society three rare flint implements, no other evidence on the main problem of the paper was known to me. The origin and date of the specimen from Le Moustier hardly admitted of question, and the Northfleet implement, in view of its characteristics and origin, would be accepted by most as belonging to the industry named after that site and equivalent to the Montières series of the Somme valley. The third, lent by Mr. Reid Moir and found high up in the Skeleton pit at Ipswich, seemed to me akin to the others though of later date, and the future was left to decide the interval of time between it and its predecessors.

Time has carried out that trust in a manner gratifying to myself, but at the same time unsettling for those who do not realize that the laws of prehistory are not those of the Medes and Persians. It has been held for half a century that the

¹ Dr. Sturge died on 27th March 1919, and his entire collection of flint implements has passed by bequest to the British Museum.

polishing of flint was never practised in the palaeolithic period, and so much has been based on that axiom that an exception would do more than prove the rule: it would break down the barrier between the two divisions of the Stone Age and make still closer the connexion between them that has been more and more clearly recognized in recent years. It has been aptly remarked that the 'hiatus' exists only in our knowledge, and it will not be long before the 'mesolithic' notion is discarded. Specimens which, apart from their partial or complete polishing, would rank as palaeolithic, have been noted both in this country and abroad,¹ but it must be confessed that the Ipswich flint exhibited in April is far from conclusive, and was only put forward as having a suggestive outline. In the Sturge Collection, however, is a thin specimen, $2\frac{1}{2}$ in. by $2\frac{1}{4}$ in., with no signs of polish but otherwise a fair parallel, and it came from Le Moustier itself.

The state in which the question was left may be realized from the following passage on the type called (for want of a better name) the protocelt: 'Its comparative rarity suggests that it was confined to a definite period, and in that case one is faced with the occurrence of polished flint at a stage of culture not far removed from Le Moustier. There are difficulties therefore in either interpretation of the obvious facts, and even if the above suggestions are not justified by future discoveries, it will at least be admitted that they rest on a number of authentic occurrences of the type in palaeolithic surroundings.'²

If things are what they seem, a still earlier form with polish, confirming the suggestion then made and taking the practice of polishing flint back to Le Moustier times, has now come to light.

News that there existed in Brighton a palaeolith with traces of polish came to me first through Mr. Reid Moir, and by the good offices of Mr. Roberts and Mr. Toms, both of Brighton Museum, I soon got into communication with the owner, Major G. T. Poole, who last month came to London and told me all he knew about the specimen. It was not purchased from any one, but found by himself to the best of his recollection at Clapton Park, Homerton, N.E. London, about twenty years ago when that district was being built over and Mr. Worthington Smith was busy, not only collecting from the excavations, but taking advantage of the sections to fix the stratification of the implements discovered. The neighbourhood of Chatsworth and Ashendon roads was then being dug for foundations to a depth of 12 ft., chiefly in sand, the distance from the Lea being $\frac{1}{2}$ – $\frac{3}{4}$ mile, and the height above Ordnance datum 45–60 ft., or 30–45 ft. above

¹ *Archaeologia*, lxiii, 147–8.

² *Proceedings*, xxx, 165.

the alluvium of the Lea (Hackney Marshes). Further details of the stratification and implements of Lower Clapton may be found in *Journ. Anthropol. Inst.* viii (1879), 275 and in *Man the Primeval Savage*, published in 1894.

The flint on exhibition (fig. 1) has never till now been out of the Major's custody and—the question being natural and excusable—was not polished after its discovery. Traces of the original matrix, firmly adhering to the surface, can still be observed on the flatter face. It is 3.5 in. long, with a maximum breadth of 2.2 in. and a maximum thickness (about the middle) of 1.1 in. The material is horn-coloured flint, darkest just under the strip of yellowish



Fig. 1. FLINT POINT, WITH TRACES OF POLISH (SOLID BLACK), CLAPTON PARK, LONDON: FRONT AND BACK, WITH SECTION ($\frac{2}{3}$).

crust on the front. This face is uniformly convex, whereas the back was meant to be flat and retains much of the original fracture-surface produced by a blow near what is now the point. It terminates below in a hinge-fracture; and what may be regarded as the butt is half an inch from face to face, plainly not a cutting-edge. On the flat face are natural inequalities of the surface to the right, and the colour is yellowish. The polished side-edges are slightly zigzag but not curved, and the point, which is thin and regular, is the part most carefully polished, the ridges only having been ground down on the sides and faces, as shown in solid black.

It is clear, therefore, that the functional parts are the point, and the side-edges that meet at the point, to the exclusion of the butt or broader end. It is for this reason the very anti-

thesis of a celt, of which the essential part is a cutting-edge at the broader end. Though the method of using the palaeolithic hand-axe is still mysterious, it will be generally allowed that in most cases the point was the principal element in its constitution, even when (as in St. Acheul times) the opposite end is as finely worked and as sharp as the side-edges. But above all the point is characteristic of a leading Le Moustier type that goes by the French name of *pointe*, and the outline of the present specimen seems to me corroborative evidence of date. Those who have read a recent paper on the subject in *Archaeologia*, lxvii, 27 ('Origin of the Neolithic Celt') will recognize in this the type there selected as a prototype of the neolithic axe. In the front view (on left) the right side is nearly straight, with its lower end fairly sharp and almost a right-angle; on the left is a fuller curve, the lower end being also rounded and fairly thick, but not so thick as the straight butt or lower edge. These are no accidental features but constantly recur in a series of flints from the brick-earth and other sources that are not inconsistent with their origin in Le Moustier times; and the occurrence of the type at Le Moustier itself should be convincing proof of its place in the archaeological sequence. Whether it was confined to that period has yet to be proved, but the onus is surely on those who would assign it to one or more other periods.

A novelty of this kind is bound to provoke criticism, but I think most of the possible objections to it have been already met. Some will refuse in any case to take it at its face value, but apart from internal evidence, I am prepared to accept Major Poole's assurance that it was found by himself in its present state. In confirmation, I may point out that twenty years ago no forger would have been familiar with this peculiar type; and even if he had been, would never have polished it, knowing its intimate connexion with Le Moustier. If its authenticity is granted, as I think it ought to be, we have polish on a 'point' of Le Moustier type and by inference of that date, before the leading rôle passed from the pointed to the broader end, that is before the double side-scraper developed (as in my opinion it did develop within the period of Le Moustier) into the celt, with a cutting-edge below and the point inserted into a perforated handle or bound by means of a withe to a haft at right-angles, to form an axe in the modern sense of the word.

To illustrate this change of function I turn to a remarkable specimen that reached me too late to be included in the programme. It is exhibited by Mr. Bellerby Lowerison, who kindly furnished all the details available, and I am likewise indebted to Professor Marr, of Cambridge, for informing me of its

existence. The flint (fig. 2) I have no hesitation in describing as a Cissbury celt, and few will be surprised to find that it bears traces of polish, as the type has been generally referred to the neolithic period, when flints were often finished by grinding. But what will surprise most people is its patination, which can be matched on many palaeoliths and yet may have been produced after the act of polishing. A much later period of use is proved by the black chipping (horizontal hatching) on either side of the

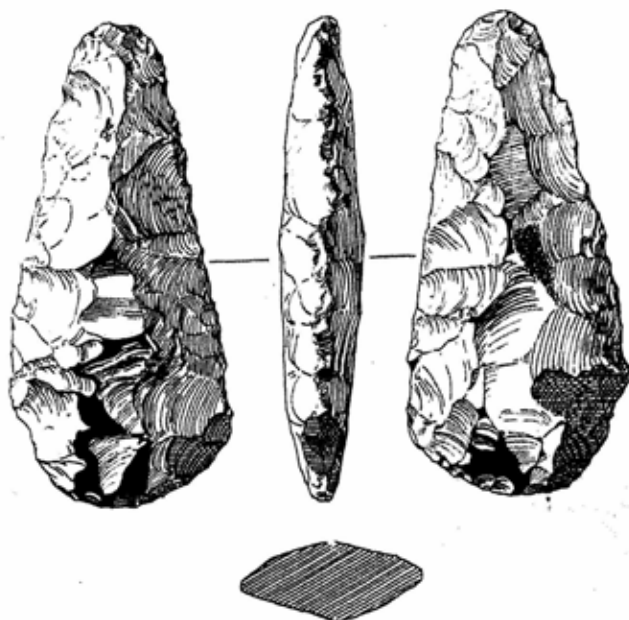


Fig. 2. PATINATED FLINT CELT WITH TRACES OF POLISH (SOLID BLACK),
FROM PIT AT HEACHAM, NORFOLK ($\frac{2}{3}$).

cutting-edge, and the contrast is instructive. The section is a flat pointed oval, the cutting-edge blunted by prolonged use and the opposite end blunt and not intended for use. Its length is 3.8 in. and maximum thickness 0.7 in., almost in the middle.

A patina of this peculiar character on an unmistakable celt is not easy to explain on orthodox lines; and even if it be supposed that in exceptional surroundings the effect could be produced in a few centuries, there is still the later chipping, with the original black practically unchanged, to prove a considerable interval between the two workings, and the later work cannot well be less than 4,000 years old, for the specimen comes not from the surface but from a pit at Heacham, Norfolk, as vouched for

by the owner, who has had it in his possession since it was found some twenty years ago. While a considerable antiquity is thus indicated for the Cissbury type of celt, it should be remembered that specimens of this character from that classic site bear no signs of polishing, and I believe the only three pieces found there, which came from just below the soil, were originally polished all over.

The position is an interesting one and I am glad to be able to show these two specimens together. Though both were found so long ago, they are as novel to me as probably to every one present, and seem to confirm each other. Whatever the date of Cissbury, the celt type would naturally be considered later than the 'point' of Le Moustier, and yet (if my classification is correct) the practice of polishing goes back to the earlier date, when we know that palaeolithic man had already begun to polish his implements of bone. There was probably nothing to prevent him polishing flint, but the famous division of the Stone Age was in 1865 based on the assumption that he did not, and the Homerton 'point' may turn out to be the earliest known example of the method, in spite of the contrast of patination in the two specimens exhibited.

The CHAIRMAN pointed out that the Society's local secretary for Bedfordshire had been a painstaking collector and a critic of what he found, hence the announcement that his specimens were being properly cared for was especially welcome. The river Ver must have been very much more rapid and important in medieval times, for according to the chronicles of St. Albans it then carried some little traffic. It was therefore probable that in prehistoric times its volume and current would have been equal to the task of cutting out the valley along which the Watling Street ran in Roman times. The second paper was of a more debatable character and would no doubt elicit criticisms from members present.

Mr. DALE thought the author had done excellent service in bringing the specimens before the Society. In January last he had himself shown a neolithic implement from gravel near Romsey,¹ patinated in the same way as palaeoliths from the same deposit. The only difference was that the present exhibit was clearly of the Cissbury type, with the working edge where it should be. The principal interest of the Homerton specimen lay in its point, and the only doubt was whether it had been polished by neolithic man, whatever the date of the original chipping. He regretted that the exact circumstances of its discovery could not be recovered.

¹ *Proceedings*, xxx, 24.

Mr. GARRAWAY RICE said the author had brought a good many surprises before the Society, and the trend of events only emphasized the danger of saying anything did not exist because it had never come within one's own experience. As a branch of science, archaeology demanded the greatest caution in striking out a new line; but in any case the paper had provided food for thought.

Mr. LEEDS desired the author's own view with regard to development in England during the interval filled in France by the Cave remains, from Le Moustier to La Madeleine. If the Cissbury type, generally regarded as of neolithic date, were in any way connected with the palaeolithic, what was the length of time required for the development of one from the other? There seemed so close a relation, that one was tempted to regard the interval as comparatively short, but that would hardly allow time for the slow development in other directions, for instance in the art of carving.

Mr. SMITH replied that relics of the later Cave period were no doubt abundant in England, but being in many cases close to the surface, had been ploughed up and regarded as neolithic by most collectors. Neolithic carving showed a distinct falling off, and Cave man was infinitely superior as an artist. The cardinal question was the relation of the Cissbury culture to the Cave period, and the Heacham example was not the only parallel: it was, for instance, easy to confuse the leaf-shaped blades of Solutré date with the broad thin knives of the latest neolithic period, as proved by their association with beakers in many barrows; but Solutré blades had been found in East Anglia, sometimes deep in gravel, if the accounts given were correct. In that case no connexion could be proved, and it might be an instance of similar needs and similar materials giving rise to similar types at widely different periods.

Thanks were ordered to be returned for these communications and exhibitions.

THURSDAY, 12th DECEMBER 1918.

WILLIAM PAGE, Esq., Vice-President, in the Chair.

Notice was again given of the ballot for the election of Fellows to be held on Thursday, 16th January 1919, and the list of the candidates to be put to the ballot was again read.

W. L. HILDBURGH, Esq., F.S.A., read the following notes on Some English Alabasters found in Spain :

The six alabaster tables I am about to describe, which are here illustrated, were until lately in Spain. Unfortunately, no history is attached to them beyond the fragments, of little importance, to which I shall refer in the course of my description. They are, however, so similar in character to various tables of known English origin that we can, I think, unquestionably assign them—as we have previously assigned other alabaster tables from Spanish sources¹—to English origins.

The earliest of the six panels is the one depicting the Crucifixion (fig. 1), which, following Prof. Prior's classification,² I take as dating from the latter part of his 'Period II', having been made about the beginning of the fifteenth century. The panel has the battlemented heading characteristic of that 'Period', while the treatment of the subject is almost identical with the treatment found in a number of other 'Crucifixion' alabaster tables, of about the same date, which have been exhibited or reproduced on various occasions. The late owner of this panel did not know the locality whence it had been brought to him; he stated, however, that he had obtained it, together with the 'Coronation' and the double-subject table to be described below, from a professional collector of antiquities who had come from Portugal. Traces of what appears to have been the original colouring remain upon the stone, as follows: the Cross, black; the nimbus, blackish with reddish markings which indicate that it contained a cross. The exposed flesh of all the figures, including that of the body of Christ, flesh-coloured; the eyes, brownish; the hair and beards black. The robes of the two women supporting the fainting Mary, red. The garment of the bearded man, dark green, or blackish, with a pinkish lining. The garment of the centurion, yellowish; his hose, blackish (but with strong traces of red to be seen in protected parts). The earth, green. The background is at present uncoloured. The

¹ See *Proceedings*, vol. xxviii, pp. 63 *seqq.*, and vol. xxix, pp. 74 *seqq.*

² E. S. Prior, in *Catalogue . . . English Medieval Alabaster Work*, London, 1913, pp. 24, and 29 *seqq.*

sunken space between the battlements, red. Size: $14\frac{1}{2}$ in. high, $9\frac{1}{2}$ in. wide.

Rather later in date, and to be assigned, I think, to Prof. Prior's 'Period III' (provisionally dated 1420-60), is the very curious panel (fig. 2) representing the Holy Trinity, with the Annunciation as a large heading. This Trinity is a somewhat uncommon representation, in which God the Father and the Holy Spirit, seated, are supporting, each by one arm, the ascended Son, who has a globe between His feet. The Father and the Holy Spirit are crowned, and are clothed in loose robes, but have their feet bare; the Son wears only a torse and a loin-cloth. In the Annunciation, Mary is kneeling, with her hands upraised, palms outward, and, in the act of turning towards Gabriel, faces the spectator. Gabriel, at the extreme left, kneels, with the vase of lilies in front of him, and points to a scroll, from which the lettering has disappeared, proceeding in Mary's direction. The Father, from whose mouth flies the Holy Spirit in the form of a dove, and of whom only the upper part appears, is between Gabriel and Mary. The panel, in its two divisions, would seem to symbolize the beginning and the end of the earthly life of Christ—the moment in which He was sent to the world, and the moment of His return to His Father in heaven. The panel retains only slight traces of its original colouring, these being mostly in the gilding of the crowns, the beards, and the hair. At the back, running downward from the middle of the upper edge, is a deep T-shaped slot of rectangular section, about $2\frac{1}{2}$ in. long and (excepting for a half-inch at the top, where it is $1\frac{1}{2}$ in. wide) about $\frac{1}{4}$ in. wide. Some distance below this, a hole passes completely through the stone. The panel came to its late owner from the same source as the 'Crucifixion'. Size: $11\frac{1}{2}$ in. high, of which the Annunciation occupies about $3\frac{1}{2}$ in. and the Trinity about 8 in., and 7 in. wide.

The third table from the source above mentioned is a Coronation of our Lady (fig. 3) of a not uncommon type. Some parts of the background, along the upper edge and the upper part of each side, and at the two lower corners, are missing, as well as some small parts of the figures. The surface of the stone has been slightly weathered, so that all colouring, excepting a little of the gilding of the crowns, the beards, and the hair, has disappeared. Each of the members of the Trinity is nimbed, but the Virgin seems to have no nimbus. Mary's crown and the crowns of two of the members of the Holy Trinity are single-tiered; the Son is uncrowned, but wears a torse. The Son's garment is thrown loosely over His left shoulder and across His knees, leaving the whole front of the trunk uncovered. Upon the edge of the pedestal beneath the Son are to be seen traces of



Fig. 1. ALABASTER TABLE OF THE CRUCIFIXION ($\frac{1}{2}$)



Fig. 2. ALABASTER TABLE OF THE
HOLY TRINITY ($\frac{1}{4}$)



Fig. 4

RATHER MORE THAN 1



Fig. 3

FIGS. 3 AND 4

ABOUT 1

ALABASTER TABLE OF THE CORONATION OF OUR LADY

lettering, seemingly 'NO DE' (? 'ANNO DE'), and upon that beneath the Father what appears to be 'MCCCCVL' (or, possibly, 'MCCCCVI.'). What the date thus expressed has been, and what relation it has borne to the panel or to the latter's history, are not clear; it has been scraped, so that parts of it have almost completely disappeared. There seems to be some probability that the date should properly have been written 'MCCCCLV', because occasionally in dates written in Roman numerals the proper order of the numerals has, through carelessness or ignorance, been altered, and the date 1455 accords better with the period to which the panel may reasonably be assigned than does 1406. There is a possibility, also, that a 'V', or a character closely resembling a 'V', has, due to carelessness of some kind, been inscribed in the place of an 'X', and that the date 1440 was intended. The panel belongs to 'Period III' of Prior's classification, and is therefore to be assigned, provisionally, to the years between 1420 and 1460. Size: 16½ in. high, 10 in. wide.

The two tables next to be described were formerly in a church in a very small village in the Province of Soria, and from there were brought direct to the person in whose hands they were when I first encountered them. They are very similar to each other in style and workmanship, and probably originally formed part of the same set—one, doubtless, devoted to scenes from the life of the Virgin. They belong to 'Period IV' of Prior's classification, and are to be provisionally dated between 1460 and 1500. One of them is a Coronation (fig. 4), differing considerably, however, in design and arrangement from the Coronation which I have just described. Here, the Virgin is seated, with the Father at her left, the Son at her right, and the Holy Spirit (in the form of a dove emerging from a cloud) above her head and holding the finial of her crown. Both Persons of the Trinity, and the Virgin as well, are nimbed. The Father wears a triple crown terminating in a cross, and a robe closed at the throat by a large jewel. The Son is also triply crowned, wearing a torse and a double crown terminating in a cross, and He is clothed in a robe open in front and exposing the trunk from the hips upward. The Virgin wears a triple crown, a close-fitting garment with a robe over it, and shoes. A great deal of colouring, which appears to be that originally applied, remains on the panel. This colouring is as follows: The cloud, black, with streaks and spots of yellow and of red. The Dove, black and red. The crowns, golden, with red spaces between the tiers. The hair of all the figures is golden, and golden are the curled and forked beards of the Father and the Son. The faces are uncoloured, excepting that

the lips are red, and the eyes retain traces of their outlining in brown. The exteriors of the robes are uncoloured, excepting for a bordering of gold; the robes of the Father and the Son are lined with red, and the robe of the Virgin with blue. The Virgin's dress is uncoloured, excepting for a bordering of gold at the neck and at the wrists; her shoes appear to have been red. The jewel at the Father's neck is green, within a golden frame. The nimbi behind the heads of the Father and the Son are circular and uncoloured, excepting for a series of small golden semicircles tangent to their rims and to each other. The Virgin's nimbus is green, and contains a series of small white semicircular lines tangent to its edge, to an inner circle, and to each other; each of these lines is faced by a similar semicircular line, so that a nearly complete small circle, at the centre of which is a yellow dot, is formed in each instance. The thrones and the short pillars upon which they are set are pinkish brown, with numerous drop-shaped black (and some red) marks. The background of the figures is golden, with small raised bosses (of which many are now missing, leaving the stone beneath exposed). The earth is dark green, with a few large-leaved plants in brownish yellow and red, and with numerous small flowers having red centres and six yellow petals. Size: 16 in. high, 10 in. wide.

The other table (fig. 5) represents the Adoration of the Kings, and is very similar in form and style to several tables of which illustrations have been given on other occasions. Its most unusual features are its excellent state of preservation and its rich colouring. Of the latter, the greater part seems to be that applied to the panel by its makers, but a portion appears to have been put on at one or more subsequent periods. The faces and hands of all, excepting Balthasar (who is shown as a negro), are flesh-coloured, with red lips and brownish eyes. Their hair (excepting Joseph's) is golden, and the beards (excepting Joseph's) appear to have been golden also, although now a very dark brown. Mary's nimbus is dark green, and contains pairs of semicircular lines facing each other with a brownish dot at the centre of each pair; these pairs are tangent to an inner circle, within which is a circle of brownish dots. The crowns are golden. The cups, all of which are of the same form (octagonal, with a knopped stem and an octagonal foot), are golden. Mary's dress and robe are uncoloured, excepting for borderings of gold. The Child's garment is greenish, with a golden band round the collar and a rich golden border at the bottom; beneath it there seems to be a red inner garment, of which a very little shows at the neck and the wrists. The Kings' garments are uncoloured, excepting for golden borders, golden lines of decoration (which in part represent their jewels),



Fig. 5. ALABASTER TABLE OF THE ADORATION
OF THE KINGS (1)

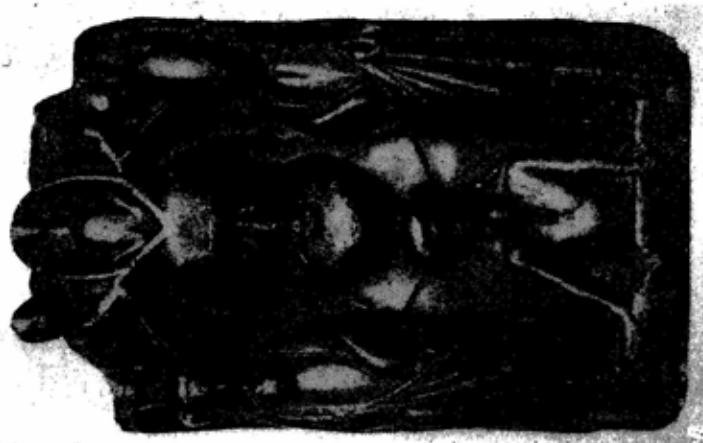


Fig. 6. ALABASTER ST. JOHN'S HEAD (1)



and red linings; their shoes are golden. Joseph wears a green inner garment, with a golden necklace (or golden borderings) in front, and a loose robe bordered with gold and lined with red. The cushion behind Mary is white, with a decoration of dots and small crosses in gold. The curtains of the bed, which retain traces of red and of a blue lining, are ornamented with gold. The canopy is ornamented with gold, and has red in the sunken lines between the battlements; the star, painted upon it, is golden. The ass and the ox are black, the former with some red lines upon its forehead, the latter with red and brown showing through beneath the black; their manger is black. The earth is green, and bears a number of zigzag markings which seem to be intended to represent grass; some traces of its original colouring, a dark green with the usual small conventional flowers formed of a red dot surrounded by six white ones, remain, but most of that colouring seems to have been removed and replaced by a lighter green with the zigzag markings above mentioned upon it. Of the original background of the figures some traces, of indistinct colour, seem to remain, but the greater part of that background, and especially in the upper part of the panel, is now of greenish and brownish tints and apparently not of the original colours. Size: $16\frac{1}{2}$ in. high, 10 in. wide.

The last table (fig. 6) is one of the type based on a representation of the head of St. John, and is very similar to some of those which have previously been described and figured.¹ It was formerly in the kitchen of a villager's house in the hamlet of Calamocha, in the province of Teruel, and its bad condition is probably to be ascribed to the rough usage it there received, and its brown colour to the smoke to which it was long exposed. Present size: 18 in. high, 8 in. wide.

The CHAIRMAN said it was interesting to know that the alabaster tables were distributed so widely, but the question remained whether they were sent out from England in the fifteenth century or taken over from the churches after the Reformation. When the Introduction to the Alabaster Catalogue was in preparation, he had drawn Sir William Hope's attention to what Sir John Mason, the British Agent in France, wrote in 1550 to the Privy Council, about three or four ships arriving from England laden with images, which were sold in Paris and caused much comment. 'The sixteenth-century order for images to be 'defaced' was taken literally, in the sense of scraping

¹ See Sir William St. John Hope 'On the Sculptured Alabaster Tablets called St. John's Heads', in *Archæologia*, vol. lii, pp. 669 *seqq.*; and Dr. Philip Nelson's 'Some Examples of Medieval Alabaster Work', in *Arch. Jour.*, vol. lxxi, p. 165 (and pl. v).

the faces ; but it was clear that the images referred to in the paper had not been so treated. Research might determine whether they were exported in the fifteenth century, as there would probably have been licences required for the purpose.

Sir HERCULES READ said the Society was glad to see so charming a series of alabasters, which were characteristic of the period but presented some features of special interest. The second table was interesting for a somewhat unusual treatment of the Trinity, with two similar crowned figures and a more or less nude Christ between them. The catalogue of the Alabaster Exhibition had unfortunately attracted less attention than its artistic, archaeological, and religious interests led one to expect. It was possible that after the suppression of the monasteries a good many alabasters were sold to merchants in southern Europe ; but in his opinion before, and possibly after that date, there was a direct, constant, and regular export trade in such carvings between England and Bordeaux for instance. It was fairly certain that a large proportion of those found in southern Europe were sent in the regular course of trade, not merely as waste or damaged material from the English factories. The perfect state in which some survived on the altars of France and southern Europe rendered it probable that the trade had been steady and prolonged, and as far afield as Spain and Italy.

Colonel CROFT LYONS corroborated the opinion just expressed by quoting a table till recently at Amiens, representing an incident in the life of St. Bavon. The subject was purely of local interest and implied that the work had been specially ordered in England and that a regular trade existed at the time. The table with the three figures wearing triple tiaras was unusual, but found a parallel in the museum at Béziers. The best table he had ever seen was in the possession of a gentleman at Madrid : it was a Death of the Virgin and retained all its original colouring, which on examination proved to be a carefully painted surface of gesso. Though many examples were of crude workmanship, they probably looked much better with their original colouring. Nearly all he had seen in Spain were mutilated.

Sir MARTIN CONWAY had had no high opinion of the majority of English alabaster carvings as works of art, and had therefore noticed how well they stood the difficult test of magnification. The earliest shown on the screen was the Crucifixion, the persons represented being the Virgin and the three Maries, with possibly Longinus and Joseph of Arimathea on the right. The lower half of the double panel represented the three persons of the

Trinity, possibly at the moment of Christ's arrival in heaven after the Crucifixion, but he could not recall any parallel in woodcuts or illuminations of that date.

The Rev. G. W. W. Minns, F.S.A., exhibited the Godsfield pyx, on which he communicated the following notes:

In 1138, Henry de Blois, Bishop of Winchester, established a Preceptory, otherwise called a Commandery, of the Knights



THE GODSFIELD PYX (RATHER OVER $\frac{3}{4}$).

Hospitallers of St. John of Jerusalem, three miles from Alresford, Hants, at Godsfield. Here an ancient building still exists which is an interesting example of the settlements the Hospitallers were accustomed to have on their manors and estates.

The remains of their house at Godsfield consist of a small building 48 ft. by 18 ft. exterior measurements. The plan is a parallelogram, divided into two. The easternmost portion formed the chapel, and the western part of the building

probably served for the accommodation of the preceptor and his chaplain. This part has two stories. There is a room on the ground floor with a fireplace and a buttery or store. A flight of stone stairs leads to an upper chamber. In the wall is a narrow slit through which the occupant might see and hear everything in the chapel below. Opening out of the chamber is a *garde-robe*, which forms an excrescence in the western wall.

At the dissolution Godsfield with its possessions was acquired by Sir Thomas Seymour, brother of the Protector. After him it passed through various hands and formed part of the estate of the late Mr. A. Houghton, of Armsworth, who died last year. The Armsworth estate was recently offered for sale by auction. Lot 2, consisting of Godsfield Farm with the old chapel, now used as a granary, found a purchaser—a Mr. J. Smith, of Southampton. Let us hope it will be preserved from further decay and mutilation.

The casket or pyx was found in February, 1870, while grubbing a hedge called Wield Row near to the old chapel. It is circular in form, $2\frac{3}{4}$ in. in diameter, 4 in. in height, and weighs 13 oz. It has a domed top, hinged, and furnished with a hasp fastening. Around the sides and cover is engraved a scroll design of leaves boldly executed in beautiful flowing curves. The material appears to be latten. It is gilded both outside and inside. The top was surmounted by some terminal ornament or cross, of which the stem remains.

The present owner of the relic, who has kindly lent it for exhibition, is Mrs. Buck, a niece of Mr. Houghton, the late proprietor of the Armsworth property and Godsfield chapel.

There were found near the pyx several silver coins of later date, principally shillings of Mary, Elizabeth, and Charles I. These the late owner had gilded and made into a necklet.

If any one can throw fresh light on the pyx it will be gratefully received.

Sir HERCULES READ had not previously seen the pyx but felt that all would realize that it was something out of the common. Specimens of the early fourteenth century were not uncommon in England and northern Europe generally, but he could remember none with so many engaging qualities. Though of the normal pattern it had pleasing variations in its lines, and the cover had its curve interrupted by two or three mouldings. The decoration again had an unaccustomed virility, and the casting was in very solid metal, carefully finished on the lathe. The boss in the middle of the base was a peculiarity, and there would normally be a small cross above the cover. The fastening was odd and could hardly be described as a hasp. There was

nothing to prove its place of origin, but he was inclined to claim it for England as it was found in the soil, and to date it about 1320. It had a special charm not to be found in the common products of Limoges.

Mr. DALE had known the pyx since 1886, having first seen it at Mr. Houghton's house. He was not sure of the connexion with Godsfield chapel, as lid and bottom were found apart and at some distance in a ploughed field. The owner had furnished it with a new hinge to keep the parts together. The chapel was an interesting structure which was well worthy of preservation, and he recommended it to the care of His Majesty's Inspector of Ancient Monuments. One of the trustees of the estate, Colonel Attree, was present at the meeting and would no doubt do his best to bring about the desired result.

Colonel ATTREE could only confirm the statement that it was found at some distance from his uncle's house.

Sir HERCULES READ added that the interest of the pyx would not be diminished if the discovery had been made even a mile away from the chapel; and felt sure that the British Museum would acquire it on any reasonable terms if the owner consented to part with it.

The CHAIRMAN, in thanking Mr. Minns for giving the Society an opportunity of examining the pyx, said that an acknowledgement was also due to the owner, Mrs. Buck.

G. H. JACK, Esq., F.S.A., presented the following report as local secretary for Herefordshire :

On the examination of certain new material from the Romano-British site of Magna (Kenchester), Herefordshire, two interesting and rare pieces of pottery were found.

Fig. 1 shows a fragment of the Samian bowl (Dragendorff 37) with a graffito of the potter Drusus thereon. The piece may be described thus :

Glaze worn, metope framed in lines of flattened beads terminating in balls. Central metope : cruciform ornament, panel divided diagonally by similar lines into four triangles. In upper and lower : hollow lozenge between two buds or stalks.¹ Inside triangles : spike blossoms on looped stalks.² In narrow metope on either side : caryatid.³

¹ Déchelette 1153, Walters M 1129, both larger, and May, Silchester, xxv, 34 (all Lezoux).

² Walters, type xl, 8, M 523 (S. Gaulish), May, *id.*, xxv, 30 (Central Gaulish).

³ Déchelette 655 (Lezoux).

On plain band below, potter's stamp in cursive characters, [D]RVSVS F. in raised letters backwards and upside down, the inscription being produced by incising in the mould. The graffito is identical in style with the facsimile from a mould found at Lezoux.¹

Only seven other examples are recorded of this little-known potter, two of which were found in Great Britain, viz. at Wilderspool and Lancaster. Apparently Drusus always signed his bowls in this manner. The bowl may be dated to the first half of the second century A.D.

Fig. 2 is a portion of a large, thin-sided, bulbous vase with curious barbotine decoration to which there appears to be no parallel. The clay is pink buff, the surface covered with thin reddish-brown wash. Date not likely to be prior to third century A.D.



Fig. 1 ($\frac{1}{2}$).



Fig. 2 ($\frac{1}{2}$).

OTHER FINDS.

Two samples, one of a granulated yellow material (Sample 1), and the other earth containing small husks (Sample 2), have been submitted to Mr. John Hughes, F.I.C.,² and he, after careful examination, reports as follows:

Sample 1.

Analysis of yellow material.

Water (lost at 212° F.)	8.80
Oil	1.27
Albuminoids	10.87
Starch and digestible fibre carbohydrates	75.56
Indigestible fibre	1.57
Mineral matter (ash)	1.93
	<hr/>
Containing nitrogen	1.74

¹ Déchelette 1, p. 271, no. 70, 1.

² Agricultural Chemist, Mark Lane, London.

Mr. Hughes says: 'From the above analysis and careful microscopical examination this material appears to be the baked or partially cooked flour of some cereal, probably barley, from the structure of the fibrous portion.'

This is not the first time that the remains of cereals altered by heat have been noted at Magna. Stukeley marks a spot on his map which is dated 1721, thus—'Burnt wheat found here'.

Sample 2. Mr. Hughes says: 'The contents of the packet consist of earth, small stones, fragments of mortar, and the husks of what I believe to be millet seed. The exterior surfaces are evidently much weathered by age and the husks are nearly all broken in half, the original contents being decayed and dispersed. Probably the seed was Great Millet (*Sorghum vulgare*).'

As millet is not indigenous to this country it would appear that the grain was imported from Italy or Spain to supplement the native cereals. The discovery is welcome as affording another instance of commerce between this country and the Continent during the Roman occupation.

So far as I can ascertain, this is the first instance of imported cereals being detected upon a Roman site in England.

C. O. SKILBECK, Esq., F.S.A., presented the following report as Local Secretary for Buckinghamshire:

In August 1918 a coin was brought to me as having been found in a field at Bledlow, Bucks. The nature of the coin—which proved to be of Faustina II—caused me to make an inspection of the field where it had been found.

The field is close to the Oxfordshire boundary, between the upper and lower Icknield Ways. It is bounded on the west by the Cuttlebrook, a small stream which here forms the county boundary, and on the east by another brook—now very nearly dry—which, joining the Cuttlebrook, encloses on three sides a space of about two or three acres slightly rising at its centre. The ground rises very rapidly to the south where the downland of the Chiltern Hills comes down to the vale of Aylesbury.

I found the field was more or less covered with fragments of tile and small pieces of pottery, and on making slight excavations in the centre, I found flooring tiles *in situ*, with pink Roman mortar, and also hypocaust tiles with their scratched patterns for keying on the plaster. These were at a depth of about a foot, and had been much broken and disturbed by the plough. It was very evident that a building had formerly existed on the spot, although its exact extent could not at the time be determined without disturbing the turnip crop, which I was loath to do, especially as the tenant was most courteous and made no objections to my researches.

I should gather that the building was of small extent, and the presence of hypocaust tiles would suggest its having been a villa. The position would be admirable for such a building, as it would here face south and north, besides being well protected and drained by the enclosing brooks, at one time evidently much wider.

The pieces of pottery are, for the most part, the usual grey earthenware, or coarse red ware, one small fragment of buff-coloured ware with a circle of red, painted round what appears to be the foot of a small jug or vase. Another fragment of the rough red ware seems to be the lip of a large pan, and apparently has a pattern worked on it. There is also a small fragment of Andernach lava, possibly a portion of a quern stone, as this material was imported by the Romans for such purposes.

The coin above referred to is in poor condition, the inscription being illegible, but sufficient remains of the profile bust to prove that it is the head of Faustina II. The reverse shows a standing female figure—possibly Laetitia—holding a staff in the left hand and some object not clearly discernible, possibly a garland, in the right. On either side are the letters S. C. The inscription here is also defaced entirely.

As has been stated, little or nothing has been done so far in the way of excavation. Only a few shallow trenches were dug at one or two points sufficient to reveal the bricks, but enough has been found to suggest that some profitable digging might well be put in hand, and every facility would be offered by the tenant, who is much interested in the discovery.

The CHAIRMAN said the report was rather in the form of a promise, but it was interesting to add another to the list of Roman finds in Bucks.

Mr. REGINALD SMITH had been prepared by the mention of Bledlow for a Roman *specula* or look-out place on the brow of the Chilterns; but the paper had made it clear that the site was in a fold of the hills, like Chedworth in the Cotswolds. There was little to be deduced from the remains on exhibition, but the painted base of a vase looked like work of the fourth century. About 14 miles east of the site he had seen a Roman building with tessellated floor and hypocaust in the garden of Lord Chesham's agent at Latimer.

Professor F. P. BARNARD, F.S.A., exhibited a photograph of an heraldic badge with the arms of Bois-le-Duc, on which he contributed the following note:

In describing a jetton of the States of Brabant, dated 1615,

in my recent book on the casting-counter,¹ I had occasion to blazon the arms of Bois-le-Duc, or Hertogenbosch, as they were at that time. This coat, but with the different treatment of the chief mentioned below, appears also on the obverse of a medal dated 1577, of which an illustration is shown in Van Loon,² where, however, no blazon is given. Being unable to



HERALDIC BADGE WITH ARMS OF BOIS-LE-DUC.

find the tinctures of the main coat in any armorial, I applied to our Hon. Fellow Jonkheer B. W. F. van Riemsdijk of the Rijks-Museum, Amsterdam. He wrote (4th June 1915) that 'it has

¹ *The Casting-Counter and the Counting-Board, a Chapter in the History of Numismatics and Early Arithmetic*, Oxford, Clarendon Press, 1916, p. 201, no. 58.

² *Histoire métallique des Pays-Bas*, French edition, Hague, 1732-7, ii, 174.

taken a very long time to answer your letter, as it was no easy matter to find out what colours were in the ancient arms of Hertogenbosch. . . . They are now different. 'The present coat-of-arms dates from 1817.' He enclosed with his reply a photograph (actual size), obtained from M. Henri Ebeling, Archivist of Hertogenbosch, of the enamelled badge, called in Brabant a 'Brodrie', worn by the Pipers of Bois-le-Duc and preserved in the museum there. M. Ebeling tells me that the badge is of silver parcel-gilt. Its date is 1530. The enamelling supplies the tinctures. The blazon is: *sable, a tree or* (the canting coat of Bois-le-Duc or Hertogenbosch); *on a quarter, quarterly, 1 and 4 sable, a lion rampant or* (for Brabant), *2 and 3 argent, a lion rampant tail-forked gules* (for Limburg); *on a chief or the double-headed eagle of Austria sable with breast gules*.

In Van Loon's cut the eagle is present from the breast upwards only, and is often so represented on these arms. Its breast is then sometimes covered with the upper half of the shield of Austria-modern (*gules, a fess argent*), the shield being coupé at the bottom of the fess.

This *brodrie* is so handsome an object, and its heraldry so excellent, that it seemed to me probable that the Society would like to record it.

SIR HERCULES READ said the exhibit was as charming an example of Flemish heraldic work as he had seen. The style was that of the Flemish tombs and belonged to the flamboyant period at its best.

W. DE C. PRIDEAUX, Esq., F.S.A., exhibited a brass inscription prepared in the late eighteenth century for the monument of King Ethelbert in Wimborne Minster, but never used.

Mr. STEPHENSON said the brass had been kept in the chained library at Wimborne for many years. On the back were slight indications of part of a figure of a lady of the early sixteenth century, as a hand and lappet of the head-dress might be recognized. Except for the date, which read 872, the inscription was similar to that now on the king's brass in the Minster.

Thanks were ordered to be returned for these communications and exhibitions.

THURSDAY, 16th JANUARY 1919.

Lieut.-Colonel GEORGE BABINGTON CROFT LYONS,
Vice-President, in the Chair.

W. L. HILDBURGH, Esq., F.S.A., exhibited some archaeological objects from Spain, and L. A. LAWRENCE, Esq., F.S.A., exhibited a silver watch with a portrait of Charles I on the case, and a pierced silver box with a portrait of Charles I on the lid.

Thanks were ordered to be returned for these exhibitions.

This being an evening appointed for the election of Fellows, no papers were read.

The ballot opened at 8.45 p.m. and closed at 9.30 p.m., when the following were declared elected Fellows of the Society :

Charles Henry Hunter Blair, Esq.
Charles Frederick William Goss, Esq.
Frank Halliday Cheetham, Esq.
Robert Forsyth Scott, Esq., M.A.
George Eumorfopoulos, Esq.
Frederick Chamberlin, Esq., LL.B.
John Edward Lloyd, Esq., M.A.

THURSDAY, 23rd JANUARY 1919.

WILLIAM PAGE, Esq., Vice-President, in the Chair.

The following were admitted Fellows :

David Randall MacIver, Esq., D.Sc.
Frederick Chamberlin, Esq.
George Eumorfopoulos, Esq.
Charles Frederick William Goss, Esq.

M. S. GIUSEPPI, Esq., F.S.A., read a paper on Wardrobe and Household Accounts of Bogo de Clare, 1284-6, which will be printed in *Archaeologia*.

Sir HERCULES READ alluded to the low price of a thirteenth century cup, as compared with what would be its present value,

and regretted that practically nothing of the sort existed. To form a picture of that early period it was, however, necessary to visualize the furniture and internal fittings such as were detailed in the household accounts; and the paper had certainly helped in that direction.

The CHAIRMAN testified to the valuable information that could be derived from household accounts with the help of an expert as familiar as Mr. Giuseppi was with the original sources. The case quoted showed that medieval judges could be influenced by bribery, and an abbot of St. Albans was said to have laid in stores to feast the justices at Hertford when they went there to try the unruly tenants of the abbey. Another point illustrated was the laxity allowed in the matter of dating, and he had himself found in the Durham Cursitors rolls entries made for 30th February and 32nd April. It would be a great benefit to have whole series of such accounts printed, those of the Le Strange family, for instance, covering a considerable period. Gradual changes would in that way be brought to light both in the social and economic spheres. The best sources would no doubt be the royal accounts, but the handling of such a mass of material would be a considerable difficulty and beyond the scope of a society.

Thanks were ordered to be returned for this communication.

THURSDAY, 30th JANUARY 1919.

Sir ARTHUR JOHN EVANS, Knt., D.Litt., F.R.S.,
President, in the Chair.

On the nomination of the President the following were appointed auditors of the Society's accounts for the year 1918:

Francis William Pixley, Esq.
Jerome Nugent Bankes, Esq.
Percival Davis Griffiths, Esq.
Ralph Griffin, Esq.

Captain R. CAMPBELL THOMPSON, F.S.A., read a paper on Excavations undertaken for the British Museum at Abu Shahrain, in Mesopotamia, which will be printed in *Archaeologia*.

Abu Shahrain lies in the desert outside the 'protected area' about 20 miles south-west from Nasiriyah. It was partly excavated by J. E. Taylor in the middle of last century, but, although he made many interesting discoveries, the limited archaeological knowledge of that time led him to underrate his results, and had he lived fifty years later he would certainly have recognized their importance in comparison with other collections. Since his time until the War, not only had there been no serious excavations on the site but it had rarely been visited by Europeans. It was considered, however, that the present time was propitious for again undertaking preliminary work, on behalf of the Trustees of the British Museum, which had in view the new archaeological responsibilities incurred by our occupation of Mesopotamia, and, with the consent of the Director of Intelligence at Baghdad, Captain Thompson was temporarily transferred to the orders of the Political Office, which arranged matters very satisfactorily with the local *shaikh* of Abu Shahrain for beginning operations. In the beginning of April 1918 the new expedition under Captain Thompson, with his Irish orderly, Private Thomas Higgins (one of the old 'Contemptibles' who was wounded at the battle of the Marne), the *shaikh* himself, and fifty Arabs as diggers and guards, travelled to the spot, where they camped and began trial trenches at once.

Abu Shahrain, the Eridu of the ancient cuneiform records, even in Babylonian times was regarded with great veneration, as it was sacred to the god Enki or Ea; and a temple called *E-apsû*, 'the Temple of the Ocean-Deep', existed here, famous for its oracles. The earliest historic mention of the city appeared to be made by Urnînâ, king of Lagash (Tell-Loh), c. 3000 B.C., and this and subsequent records showed that it was never an independent city from that time onwards. It had a great reputation in magic, owing to its connexion with the god Enki, and its name occurred in one of the Babylonian myths of Creation, and in the legend of Adapa. It ceased to be of importance from a comparatively early period in the history of the country, and it was quite probable that it was deserted long before the other southern Babylonian cities.

The new diggings showed that the work of the King Bur-Sin of Ur (c. 2350 B.C.), who refaced the *zigurrat* or Temple-tower with burnt brick (as was shown by Taylor's excavations), was preceded by that of his grandfather, Ur-Engur, a fact hitherto unknown, and this was the earliest local record that existed. Bricks of Nur-Adad, a king of Larsa, c. 2175 B.C., were also found, showing that he, too, held sway at one time over Eridu. At some subsequent, and perhaps no distant, time the sacred character of the city, after it had been deserted, led the ancient peoples

to bury their dead there, for the greater part of the upper strata contained interments.

But the principal result was the discovery of the pre-Sumerian inhabitants of southern Babylonia. Hitherto knowledge of the earliest occupants had been confined to the two races, the Sumerians and Semites, who appeared to have been occupying the land practically side by side at about the end of the fourth millennium B.C. At the same time it had been the custom to consider that there was little or no evidence for neolithic occupation of Babylonia, in spite of the stone chippings noted by excavators on numerous Babylonian sites. Dr. L. W. King, in his admirable chapter on Cultural Influence in his *History of Sumer and Akkad*, summed up the situation: 'How far Babylonia participated in the prehistoric culture of Elam it is difficult to say, since no neolithic settlement has yet been identified in Sumer and Akkad. Moreover, the early Sumerian pottery discovered at Tello, which dates from an age when a knowledge of metal was already well advanced, does not appear to have resembled the prehistoric wares of Elam, either in composition or design.'

The excavations at Abu Shahrain cleared up the problem. Quantities of pottery were discovered made of a buff ware painted in black with geometrical designs of exactly the same remarkable kind as that found at Susa in the lowest stratum (20 to 24 metres in depth). Moreover, the excavations carried out by M. de Morgan at Susa in Elam, by MM. Gautier and Lampre at Mussian (about 93 miles westwards of Susa), and by Pumpelly at Anau (300 miles east of the Caspian) showed most distinct connexion in early prehistoric times between all these three localities, particularly with regard to the designs on the pottery. As Dr. King said, the prehistoric pottery from Susa was entirely different from the earlier Sumerian pottery, and hence it was clear that (1) the earliest occupants of Eridu were of the same race as the prehistoric Elamites; (2) that the Sumerians had no racial affinity with either.

The numerous chert hoes and ground axeheads of other stone, of which about 400 had been brought home, besides large quantities of flakes of flint, obsidian, and crystal, showed how extensive the prehistoric settlement Eridu was, and their similarity to such implements found at Susa was striking. Also the (uninscribed) clay 'nails' which were peculiar in always being bent up at the point, entirely different from the inscribed clay 'nails' found on Sumerian sites, had their counterpart at Mussian and Susa.

Further, it was not only at Eridu that this race of pre-Sumerians of Elamite connexion was in occupation. Preliminary explorations, carried on just before excavations began, in an area

about 85 miles east of Abu Shahrain, south of the present Euphrates, showed that this race lived in several settlements in that district, for traces of similar pottery were found on the surface at Tell-el-Judaïdah, Tell-el-Lahm, Abu Rasain, and an unnamed mound south-east of Murajib station, and at the large mound of Muqaiyar.

The earliest inhabitants of the southern part of Babylonia (south of the Euphrates) were thus culturally, and presumably racially, akin to the prehistoric dwellers of Anau, Susa, and Mussian, and the Sumerians were of different stock. These latter entered Babylonia not later than the fourth millennium B. C., and the consideration that they were so fundamentally different from this pre-Sumerian people was an argument against their having invaded Mesopotamia directly from the east.

Writing appeared to have been unknown to the primitive people equally at Eridu as at Susa and Anau, but their skill in working clay and stone showed that they were fairly civilized when they migrated to Babylonia. Lack of metals compelled them to make even their sickles of clay, which, as well as stone corn-rubbers, occurred so frequently, as to show that they depended greatly on cereals for sustenance. The freshwater mussel (identified by Mr. Bullen Newton of the Natural History Museum), which occurred in considerable quantities in the strata, evidently provided primitive man with another kind of food, and incidentally went far to disprove any propinquity of the Persian Gulf to Eridu at that time, although a limited amount of sea-shells showed that it was within reach.

Sir FREDERICK KENYON explained the conditions that had made possible an archaeological mission to Mesopotamia. Permission was asked through the War Office of the General commanding to attach a scholar to the forces operating on the Tigris as soon as sufficient military progress had been made; and as a former official of the British Museum was already with the local G.H.Q. staff, he was very properly asked to look after the interests of archaeology. He was instructed to prevent damage to ancient remains, and encouraged to take any opportunity of excavating promising sites. Mr. L. W. King, whose reputation as an Assyriologist was well known to the Fellows, was to have joined Captain Thompson, but unfortunately fell ill at the last moment. Another Fellow of the Society, Captain H. R. Hall, had, however, already arrived in Mesopotamia to excavate for the British Museum. In the lower valleys of the great rivers sensational finds like those at Nineveh could not be anticipated, but there was good prospect of finding traces of the earliest local civilization, which had not yet been satisfactorily identified.

What had been already done was only a beginning, and the work was being followed up with all the resources at present available. Efforts were also being made to open up other areas in which British troops had operated, and he hoped the undertaking would be a credit to the country. The opportunities at present existing were a national responsibility, and Britain should be as successful as any other nation in the archaeological field. He hoped the Society would help in influencing public opinion, and in procuring funds and workers to carry out the scheme. Even politicians were now persuaded that there was a public interest in such matters. The present paper represented the firstfruits of an organization that was capable of indefinite expansion.

Mr. R. BULLEN NEWTON, F.G.S., of the Geological Department, British Museum, made the following remarks on some shells, etc., collected by Captain R. Campbell Thompson from excavations made at Abu Shahrain, Mesopotamia:

At a depth of 12 ft. in one trench, the valves of a freshwater mussel, *Unio* cf. *tumidus*, were found. In the same trench at a lesser depth, this *Unio* occurred in association with the freshwater Gastropod, *Melania tuberculata*. Another trench at 6 ft. depth yielded the same *Unio*, accompanied by remnants of the marine Gastropod-shell, *Strombus*; some carbonaceous material with a woody structure—possibly petroliferous; a pig's tooth; and a flint flake. In a further trench at a depth of 4 ft. occurred the valve of another freshwater mussel, *Anodonta rhomboidea*, a shell originally described from the River Euphrates by Isaac Lea. In another trench, oyster shells (*Alectryonia* cf. *cucullata*) were found with remains of the same *Strombus*.

Numerous examples of *Melania tuberculata* were also collected from the desert surface of Abu Shahrain, this species being similarly abundant over certain regions of northern Africa, Madagascar, India, etc. The deposits containing these specimens were of a fine silty-alluvium character and undoubtedly of fluvial origin, resulting from the overflowing of the River Euphrates at different periods, on account of the presence of freshwater shells which exist in that river at the present day. The association of such shells with shells of marine habit, the pig's tooth, and the flint flake, etc., would, in my opinion, suggest that the site where they were found was once occupied by a primitive race, the soft animal parts of the shells as well as pig's flesh forming part of the food of those early races. It is suggested that the *Strombus* and oyster remains were introduced from the Persian Gulf since they now occur living in those waters. It may be noted that only the basal parts of the

Strombus-shell were found, having apparently been fractured for the extraction of soft parts as a food. As the upper or spiral portions are entirely missing it is assumed that they may have been used for bartering or other purposes. It is quite possible that the *Strombus*-animal was then used as food since that mollusc is still to be seen on sale in the Suez market at the present day. So far as Captain Thompson's specimens are concerned there is no evidence that the sea ever reached this particular district of Mesopotamia, Abu Shahrain being a considerable distance from the present littoral margin of the Persian Gulf, although it has long since been proved that a former littoral margin can be traced more than 250 miles inland in a north-westerly direction between Warka and Korna and within a short distance of the alluvial plains that stretch away to Abu Shahrain and beyond. For such information we are indebted to the researches of W. Anderson¹ and W. K. Loftus,² who reported the occurrence of recent marine deposits at Warka, Korna, and other neighbouring localities containing species of shells more or less identical with those now living in the Persian Gulf, which they interpreted as marking a former margin of the Persian Gulf. These geological results seem to negative the old idea that this Babylonian site, known afterwards as *Eridu* and later as Abu Shahrain, was ever a marine port.

The PRESIDENT was of opinion that a prehistoric stratum had been established on the site, and thought the arguments from the decorated pottery were conclusive, the same patterns occurring at Susa and Abu Shahrain. The earliest inhabitants preceded the Sumerians, and it would be interesting to know whether that primitive culture could be connected with what the Pumpelly expedition found in southern Turkestan. A rough survey of the pottery recalled the primitive wares of Anatolia and Cappadocia, as discovered by Chantre, and neolithic pottery of elaborate character existed on the other side of the Euxine, in south Russia, and the eastern Balkans. The vein of research opened up was of great promise, and he hoped that the programme outlined by Sir Frederick Kenyon would be carried out. Among the finds were clay imitations of implements, such as sickles, axes of various forms, and thick nail-like objects with curved points: parallels had been found at Tello, and were no doubt used as votive offerings. Captain Thompson deserved not only the Society's thanks for his interim report, but also

¹ *Researches in Assyria, Babylonia, and Chaldaea*, 1838.

² On the Geology of Portions of the Turko-Persian Frontier: *Quart. Journ. Geol. Soc.*, 1855, vol. xi, p. 247.

congratulations on having carried out the work in spite of many and great difficulties.

Captain THOMPSON stated, in reply, that a votive axe had been found, with black marks on it, resembling those from Tello, and probably of the same date as the painted pottery. There was no doubt that the sickles belonged to the prehistoric stratum, and he had tested the edge of one on grass with fairly satisfactory results. Almost the only materials available locally in ancient times were clay and a little fuel, so that much had evidently been imported.

Thanks were ordered to be returned for this communication.

THURSDAY, 6th FEBRUARY 1919.

WILLIAM PAGE, Esq., Vice-President, in the Chair.

The Rev. H. G. O. KENDALL, M.A., F.S.A., read the following paper on Avebury and Grime's Graves:

Of the two sites dealt with in this paper, Grime's Graves, in Norfolk, consists of a large number of saucer-shaped hollows in the ground, which cover filled-in shafts, excavated in prehistoric times through the superincumbent sand into the chalk, as far down as a layer of excellent flint. For the purpose of mining the flint, galleries were run from the foot of each shaft. Chipped flints, as well as other objects, have been found in the filling of the shafts, and are numerous at and near the surface of the ground within the area of the Graves, and for some distance around.

The other site, in North Wilts., consists of ploughed fields at the foot of Avebury Down, about half a mile east of the village. Like the fields around Grime's Graves, the site is prolific; as are, also, the fields on Windmill Hill, which lies one mile north-west of Avebury.

The author's object is to bring forward strong evidence, by a comparison of a number of flint implements from Avebury Down with those from Grime's Graves figured in the *Report* on

the excavations conducted there in 1914, to show that the latter are not earlier than the Neolithic Age.¹

There is a school of prehistorians which places the industry at Grime's Graves between the periods of Le Moustier and Aurignac, in the Cave or second division of the Palaeolithic Age. It relies for its evidence on the likeness between some of the implements from the Norfolk site and specimens from France of acknowledged Le Moustier or Aurignac date. Its argument is that the men of the Cave periods are known to have lived in England. Some of their flint implements must have been dropped in the open. Where the older rocks are covered only by a few inches of humus, there the implements belonging to these periods will be found mingled with those of later ages, e.g. the Neolithic. Those at Grime's Graves and of allied industries from other English sites are regarded as belonging to the Palaeolithic Cave division.

The theory is, of course, a reasonable one; and we are indebted to those who have drawn attention to the question of the age of the surface flints, by advancing it. It is natural for them to ask: 'If many of the surface flints (turned up by the plough from the humus) are not remains of the Cave division, where are the latter?'

The answer, as it presents itself to the author, is:

1. That, as a rule, the implements of the Cave periods found in the open have been covered up by deposits older than the humus, and are found embedded in them, beneath it (*vide* Prof. Commont's discoveries, e.g. at St. Acheul; and instances in England, e.g. at Fisherton, Wilts.). In the author's view it is comparatively seldom that implements of the Cave division are found in more exposed positions.

2. Further, the positive evidence that the implements from Grime's Graves and allied industries (represented in the humus) are Neolithic, and sometimes later, is so strong that the theory of this school does not apply to these particular sites.

There is a difficulty in presenting such a subject as this without being somewhat positive in statement. But it is hoped that it will be done without being in the least degree offensive to those who take the opposite view; and with the strongest appreciation of their labours in the prehistoric field of archaeology.

In bringing their theory to bear on the flint implements of Grime's Graves, the author's opponents start with a strong handicap against them.

¹ The following nomenclature is used:—Ages: Palaeolithic (and others earlier), Neolithic, Bronze, etc. The Palaeolithic Age is divided into Drift and Cave Divisions, and the Divisions into Periods. There are Periods within the earlier and later ages also.

Mr. W. G. Clarke has brought forward eight cogent reasons for regarding that site as of the Neolithic Age.¹

1. No animal remains of exclusively Pleistocene Age have been found. The facies is that usually classed as Neolithic.

2. The characteristic tool is the pick of red deer antler. Apart from the flint-mines, this has not been found in any pre-Neolithic deposits. It is recorded with Neolithic, Bronze Age, and Romano-British relics.

3. Pottery is very rare in pre-Neolithic deposits. It is found in eight flint-mines.

4. The molluscan remains from Grime's Graves have been pronounced early Holocene; and the age of Grime's Graves as the damp period succeeding the warm Tapes period.

5. The charcoal is that of trees found in Neolithic deposits; and the abundance of the beech favours a Neolithic date.

6. Though there are numerous analogies between the implements found at the Graves and those of Abri Audi (the typical transitional site between the Le Moustier and Aurignac periods), on other sites where similar implements are found they are associated with implements, of the same patina, which are always classed as Neolithic.

7. Ground and polished flints are rare from most Neolithic sites, and are not recorded among implements of Abri Audi date. The rarity of polished implements at the mining sites is, therefore, not incompatible with a Neolithic date.

8. The tortoise core and the faceted butt are not general features of the mining industry; they are practically confined to a few sites; and the analogies of the many sites with Neolithic industries are as important as those of the few with Le Moustier.

I hope to show that the tortoise core, as well as the faceted butt, the former sometimes in its perfect, and sometimes in its modified form, is as strong a feature of the Neolithic and Bronze Ages as of the Le Moustier period; though not, perhaps, so numerous in its perfect form. Faceted butts are common on both the sites which are here being dealt with, and tortoise cores are also numerous.

Mr. Clarke's eight points give strong reasons for a Neolithic date for Grime's Graves.

In dealing with the chipped flints, it would have been more telling at the moment to have made a comparison with all the sites in the neighbourhood of Avebury. Exact replicas could then have been shown of a larger number from Grime's Graves. The slower method has been chosen of a comparison with these

¹ *Proceedings of the Prehistoric Society of East Anglia*, vol. ii, part iii, p. 339.

sites one by one. Perhaps, in the end, this cumulative method may be the more sure.

A comparison has already been made between implements from Windmill Hill, near Avebury, and some from Grime's Graves.¹ And the process has been by no means exhausted. In the first paper strong likenesses were shown between a series from Windmill Hill and a large proportion of the necessarily limited number from Grime's Graves figured in the *Report* on the excavations. In the second paper, the Northfleet method of obtaining flakes, from a carefully prepared core, was seen to obtain at Windmill Hill; precisely similar flakes and cores occurring at Grime's Graves. Chisel-ended arrow-heads from the Wiltshire site were figured. These are a feature of the Neolithic industries of Egypt and Denmark; and are unknown from Palaeolithic sites of the Cave division. Some of the cores and flakes are made from polished celts. Briefly, the conclusion was drawn that the chipped flints of Windmill Hill are Neolithic or later; and therefore, because of their great likeness to them, the series from Grime's Graves. The same method will be adopted in dealing with the latter site and Avebury Down.

An objection has been lodged against the foregoing conclusion, on the ground of the small size of the implements from Windmill Hill. The question of size is, in these instances, solely one of flint supply. If the people of Windmill Hill had been transported to Grime's Graves, they would have made implements as large as those of the natives of that part of Norfolk. Conversely, if some of the latter had found themselves dwelling on Windmill Hill, the chipped flints which they would have left on the ground would have been exact replicas, in size and style, of those which are actually found there. Avebury Down is a proof of this. Natural flints at Windmill Hill are small and comparatively scarce; and a number of the brown-stained flints of early Palaeolithic, or so-called 'Eolithic' Age have been utilized. At Avebury Down the material is a little larger and more plentiful. A few flakes of as much as 3 in. to 4 in. in length occur on Windmill Hill. The cores, which were seldom large to begin with, have been reduced by continual fresh chipping down to a very small size in many instances. This fact shows that flint was not plentiful enough for a comfortable supply. The previous statement makes it evident that a larger flake or implement was made when the opportunity occurred.²

¹ *Proceedings of the Prehistoric Society of East Anglia*, vol. ii, part ii, p. 230; vol. ii, part iii, p. 563.

² A recent search on Windmill Hill revealed only three or four nodules as much as 7 in. by 3 in. by 1½ in. extreme measurements. The remainder were, for the most part, much smaller.

At Avebury Down, the raw material is spread most thickly at the upper end of the field at the foot of the down. A good deal of it has been naturally fractured. Most of the fractures are not later than the time of the prehistoric flint chippers, and the pieces were frequently picked up and used by them just as they were, or with a minimum of human chipping. It is rare to find a nodule as much as, say, 10 in. by 3 in. by 3 in. The vast majority are much smaller. The quality of the flint is poor, as a rule. The industry is identical with that of Windmill Hill: except that the oldest period, of the white patinated flints, is less represented, it appears, at Avebury Down. Tools of the middle period are abundant at both places.

In view of what has already been pointed out, in regard to size, about Avebury Down and Grime's Graves, it is important to note that the material being a little larger and more plentiful at Avebury Down than at Windmill Hill, the implements are, so to speak, a size larger at the former site.¹ At the same time, it should be stated that very small implements do occur at Avebury Down, precisely similar to those at Windmill Hill, but not so numerous, and the very smallest not quite so minute. The next important fact in this connexion is that comparatively large, coarse pieces and flakes prevail at the upper end of the field at Avebury Down, where the material is more abundant; whilst smaller and finer tools become more numerous towards the lower end of the field, in the direction of Avebury, where natural flints are but sparsely scattered.

At Avebury Down, as at Windmill Hill, a larger flake than usual was made, when a suitable nodule could be found. Two specimens measure, respectively, $4\frac{3}{8}$ in. by $2\frac{1}{2}$ in.; and $4\frac{7}{8}$ in. by 2 in. The series is, of course, smaller than Grime's Graves. A plain flake figured in the *Report* on the excavations measures $7\frac{1}{2}$ in. by 3 in.; and a flake-implement $6\frac{1}{2}$ in. by $3\frac{7}{8}$ in. But the larger size at Avebury Down, though not constituting a great disparity with Windmill Hill, helps some students to believe in the identity of the former industry with that of Grime's Graves.

The series from the two Wiltshire sites just named constitutes the largest and most important near Avebury. All the specimens are turned up out of the humus. There is an *a priori* likelihood that these large groups, close to the important station of Avebury, and alike in patination, style, and provenance, should

¹ It may be useful to give one or two measurements. A large chopper from Avebury Down measures $3\frac{3}{4}$ in. by 3 in. by $2\frac{3}{4}$ in. A similar implement from Windmill Hill is $3\frac{1}{8}$ in. by $2\frac{1}{2}$ in. by $2\frac{1}{8}$ in. A large scraper from Avebury Down is $2\frac{3}{4}$ in. by 2 in., and one from Windmill Hill measures $2\frac{3}{8}$ in. by $1\frac{1}{8}$ in.; extreme measurements.

have been made and used in the period when the Temple at Avebury was put up, which is shown by the excavations to have been, in all probability, the latter end of the Neolithic Age. The neighbourhood is covered with monuments of the Neolithic and Bronze Ages: long and round barrows, camps, lynchets, stone circles, and dolmens. Some of them, unhappily, which are known to have existed have vanished.

Whole polished celts are not common, here or elsewhere. But they have been found in the closest conjunction with the Avebury Down series of chipped flints. A labourer who has for many years picked up flints considers that, perhaps, a bare dozen of whole specimens have been found in the last fifteen years. Pieces of broken-up polished celts are, on the other hand, numerous. They have been intentionally chipped into cores, flakes, scrapers, knives, etc. The chipping on these is of the same style as, and the patina identical with, that on the implements, etc., made from natural flint nodules. All are found in the closest association, within the humus, six to eight inches in depth; and scattered alike over the same ground. The humus at Avebury Down, and on the top of Windmill Hill, is blackish. The chalk underlies it. In face of these facts, it seems inadmissible at one and the same time to assign the polished celts and the tools chipped from pieces of them to the Neolithic Age; and the precisely similar tools found with them, made from ordinary flint nodules, to the Cave division of the Palaeolithic Age.

In the *Report* on the excavations at Grime's Graves, a large proportion of the figures represent, necessarily, the more highly finished implements: about thirty out of fifty-eight. A knife-like implement which is given a prominent place is not common at Grime's Graves and is scarce at Avebury Down. Even under the above arrangement, the implements here figured from Avebury Down show a close correspondence to those illustrated in the *Report*; as, also, do the specimens from Windmill Hill (*ante*, p. 81).

The industry at the three sites is still more clearly seen to be identical when the rougher material is examined and compared. The method of dealing with the flint was precisely the same. Dr. Peake has pointed out that Grime's Graves is essentially a flake industry. This is manifestly true of Windmill Hill and Avebury Down also. A comparison of the flakes and cores, and the large numbers from all these sites, show plainly enough that the flake was a chief desideratum, and that it was obtained by the same method, viz. by the manufacture of the 'tortoise' and allied cores. Flakes were often converted into scrapers, knives, etc., by trimming.

Turning now to a detailed consideration of the implements here shown, it should be remarked that—

1. A few are of the same type as the corresponding specimens from Grime's Graves, though they do not bear the closest resemblance in detail;
2. A large number show a very strong likeness;
3. And some are exact replicas.

For the sake of convenience, the figures illustrating this paper are numbered so as to correspond with those in the Grime's Graves *Report*: thus fig. 21 *a* should be compared with fig. 21 in the *Report*; fig. 31 with fig. 31 in the same, and so on.¹

Long scrapers, both of a rather coarse and of a fine type, are represented, and are of the same style of workmanship, at both sites. The proportion of long scrapers at Avebury is considerable. Too much stress has been laid on the occurrence of long scrapers on surface sites as probably indicating a Cave period. Long scrapers began far back in the river drift division, if not earlier; and, naturally enough, since they were highly convenient, continued down to the latest prehistoric times.

The workmanship on fig. 19 *a* is similar to that of fig. 19 (G. G.), and to that of a duplicate to the latter from Avebury Down; as is also the patina, a thick white. The horseshoe end overhangs so much that the tool cannot, ultimately, at any rate, have been used for scraping at that end; though it might have been a strike-a-light. Perhaps, however, it was turned upside down, and its side edges were used for cutting or scraping.

There can be no reason for placing it in any other period than that of the other specimen from Avebury Down. But, inasmuch as it is made from a portion of a polished celt, it is manifest that both, and by analogy the Grime's Graves specimen also, are not earlier than the Neolithic Age. Undoubtedly that is their true designation. The portion of ground surface remaining is marked in the illustration by short transverse lines.

A long scraper (A. Dn) is interesting as having an intentional notch in the middle of each side. Others have a notch on one side only. There is, also, a small amount of chipping on the inner face, at the upper end, on the first-named; more pronounced on some other specimens, whereof the scraping edge is thus completely destroyed. It may be that some scrapers of which the end had become steep by repeated chipping, afforded a

¹ All the specimens from Avebury Down discussed in this paper were exhibited when it was read, and others besides. All but a very few may now be seen in the British Museum. The present condition of the printing trade unhappily prevents the reproduction here of more than a small proportion of their number.

convenient striking platform at the end, and an attempt was made to obtain a thin flake off the inner face of the implement. There may, also, be other additional explanations of the phenomenon.

Steep-ended scrapers, and likewise fluted chipping, are noteworthy features both of Avebury Down and of Windmill Hill; and, if my main thesis prove correct, are by no means confined to the Aurignac period of the Cave division. Flakes and pieces with battered backs, as fig. 20, are sufficiently common, and are precisely similar in character to those from Grime's Graves.

A small celt (A. Dn) has the tranchet edge and parallel sides



Fig. 19 a.



Fig. 20.

seen in the Grime's Graves specimen: fig. 21, *G. G. Report*. The edge has been formed by detaching a single transverse flake from the end of the implement. Both were for use in the hand for chiselling or cutting. Another, also parallel-sided, is made from a polished celt; portions of ground surface still remain on both faces, whilst the rest has been chipped away. It is impossible to say whether such specimens as this were chipped with a view to producing a rough hand-celt, or for obtaining flakes, or for some other purpose. Probably all three guesses would be true of a series of them. Yet another has an edge after the manner of the Grime's Graves specimen, except that it has been produced by blows from the end. It will be noticed that in this type of instrument the edge is often a little to one side, which was more convenient for use in the hand. This tool has been used either for planing or scraping, or both. Portions of the surface of the polished celt from which it was made remain on one face.

Fig. 21 a has a tranchet end, and well exemplifies the fore-

going remark about use in the hand. It is coarsely made and has a somewhat corroded surface, and should probably be dated with the scrapers, figs. 19 (G. G.) and 19 *a*, etc. (A. Dn). A heavy blow towards the lower end of the picture has caused an incipient cone. The flint round this has, in due time, weathered out, and the full cone is now exposed.

It is suggested in the *Report* that the tapering point, fig. 23, is possibly complete. In a few of these implements this is the case. But two facets at the lower end have been impinged on when the implement was truncated; showing that this was probably, in its origin, a complete celt. The Avebury specimen,

Fig. 21 *a*.

Fig. 23.

fig. 23, undoubtedly was; it is made by re-chipping a polished celt. The chipping has removed most of the ground surface. The facets end sharply against and below the remaining portions of the latter, which consist of a small patch on the face not shown, and a long strip up the middle, as seen in the illustration. This specimen, unlike that from Grime's Graves, is parallel-sided. Another, from near Avebury, has tapering sides, like the Grime's Graves implement, but is thicker at the point. A third, of shorter and broader proportions, was obtained by using the back end of a polished celt, with flattened sides, the truncated part for hand-grasp, and a chiselling edge at the narrow end. Fig. 25 (G. G.) is a typical hand-celt. The type occurs at Windmill Hill. Another in my collection, from near Avebury, is made from a polished celt. One from Avebury Down is very curious.

It is ground on both faces at the upper end, and has been made from a Tertiary flint pebble. Some chips which have removed part of the ground surfaces are early, being patinated white. The inner face is flat. Fig. 26 in the *Report* was, perhaps, used as a celt at first. The subsequent chipping away of the sides suggests the making of hollows for hand-grasp, probably with grass wrapped round it, and the employment of the edges near the pointed end for cutting. The Avebury specimen is cleverly made, with the least possible number of blows, and shows by its



Fig. 26.



Fig. 27.

whitey-blue patina, sharp condition, and workmanship, that it belongs to the latter part of the Avebury Down series. It is undoubtedly a celt (fig. 26).

It is difficult to assign a reason for the manufacture of such implements as fig. 27. The identity of species between the specimens from the two sites is evident; though that from Avebury has the incidental peculiarities of crust remaining on the back, and the flaking of the lower half of the inner face, with a view to bringing it as nearly as possible into the same plane as the upper half, by the removal of a projecting portion of its surface.

Fig. 28 from Grime's Graves is described in the *Report* as a disc, and is compared with implements of late St. Acheul date

from East Anglia. I venture to suggest that great caution is needed in comparing implements which clearly belong to surface series (i.e. implements and tools belonging geologically to the humus; *vide* the flakes, etc., on the north and west fields at Grime's Graves) with those from the river drift. The number of cases in which style of chipping and details of manufacture agree, is probably small. The river drift specimens are usually better balanced, of handsomer make, and more serviceable for cutting or chopping. Moreover, a detailed examination now makes it evident that many of those from the surface periods are cores, not implements. At all three sites the number of cores and flakes is immense. That many so-called discs and ovate implements must be included among the former is shown by the



Fig. 28.

fact that no attempt has been made to produce a serviceable edge; and that on one or both faces will usually be found either a facet whence a suitable flake has been removed, or one or more deep facets running a limited distance into the face of the core, and showing where the attempt to obtain a flake of the desired length failed. With so intractable a material as flint, this must often have been the case; and so, indeed, we now find it was. This supposition will explain the *raison d'être* of many chipped lumps and pieces of flint, in which, otherwise, it is impossible to see any object. There is, however, a class in which the object seems to have been the obtaining of a short cutting-edge with the least possible trouble. That it was necessary to shape a core, either thin or thick (sometimes several), in order to have a reasonable chance of getting a flake of a desired shape and size, has perhaps hardly as yet been sufficiently realized. A little practice would probably bring home the fact. Fig. 28 from Grime's Graves has had a flake taken off the one face, and a parallel-sided flake has been obtained from the right-hand edge of the other face; whilst an attempt, on the left-hand edge, to get

a flake across the stone has failed. That, at least, is the story which the picture seems to tell. Whether subsequent chipping produced a useful edge at the base of the figure does not appear. Fig. 28 from Avebury shows a failure at the upper right-hand edge; and another, more egregious, at the lower right-hand edge. In fig. 28 *a*, success was met with from about the middle of the right-hand edge. A flake was obtained, such as might be found on the field to-day, and might have been used for cutting, or converted into a small scraper. In each of the two foregoing,

Fig. 28 *a*.

Fig. 29.

the chief attempt was made from a little prepared platform on a part of the periphery of the core. Sometimes the removal of the flake makes a large gap in the irregular edge of the prepared disc or ovoid, giving still further evidence of its manufacture as a core rather than as an implement. Otherwise the periphery would have been treated with care. In some instances, no doubt, the double purpose was served of a core and a cutting tool. Fig. 28 *a* is made from a polished celt, a part of one side of which is manifest on the lower left-hand side of the drawing. This core, therefore, shows that its congeners, of identical make, provenance, and patina, do not ante-date the Neolithic Age. And the cores at Grime's Graves are, except as regards size, own brothers to those from the Avebury site.

The extraordinary likeness between the two implements figured as 29 (in the *Report* and here) need hardly be com-

mented on. Both, apparently, have very obtuse, and not very useful, edges. Yet one can hardly suppose that they were intended for other than large hand-celts. The Avebury specimen has been completed by a transverse blow, after the manner of a tranchet; but in this case somewhat obliquely. Like that type of celt, it has a square end. It is $4\frac{1}{4}$ in. long by $1\frac{7}{8}$ in. thick at the middle. Small tranchet implements occur on this site; and also, numerous, on Windmill Hill. A somewhat similarly shaped but much rougher type of chipped flint ranges from a rude plane or celt to a broad-ended core. The majority of this class have an edge which is quite useless, and one or more facets up the middle whence a flake has been taken, showing that it is a form of core. The class represented by fig. 30 (*G. G. Report*) is of importance. It is absolutely typical of the industry represented by Avebury Down and Grime's Graves. Fig. 30 (*G. G.*) may be a chopping implement.



Fig. 31.

But in most specimens of this class the uneven outline, bold, irregular chipping, and lack of finish differentiate them strongly from double-faced Le Moustier implements. Precisely the same remarks apply to figs. 58. In this instance they are cores.

It is difficult to say what was the object of chipping flints into the 'dolphin' shape of fig. 31: perhaps a variety of objects. The Grime's Graves specimen is broad, and cannot have been used except at the pointed end, which does not appear to have been intended for any practical purpose. In fig. 31 from Avebury a small flake has been removed from the flat ventral plane. This flake had a curved edge and might have been used, as other specimens from Avebury and Windmill Hill show. An attempt has been made to flake off, as it were, the dolphin's shoulders or else to make a cutting edge at the broad end. It has failed. A narrow specimen (*A. Dn*) represents a not uncommon variety. A broad flake has been struck from the side. These flakes with the bulb on one of the long sides occur on both the Wilts and Norfolk sites, and are apparently numerous in Egypt. A segmental tool differs from that from Grime's Graves, fig. 32 (*G. G. Report*), only in having both

faces convex. It has been used for hammering or pounding, at its somewhat obtuse edge. Another specimen has one flat face.

Much stress is laid, in the *Report*, on the Palaeolithic affinities of fig. 34. This type, ranging from discoidal specimens to pointed ovate (like those figured), is a favourite one in the Avebury, Grime's Graves, and allied industries. Somewhere in the world the Palaeolithic races must have influenced rising peoples and handed on at any rate some traditions; there cannot have been a *complete* hiatus; and this type of implement may have been preserved in certain parts of the world, and its



Fig. 34.

use again introduced as migration once more took place. Palaeolithic implements, too, were found by men of Neolithic and later times, and might quite well be imitated by them for their own purposes. Some few, in the series under discussion, were used for cutting; others, such as the Avebury specimens figured, were manifestly modified tortoise cores. These are pointed ovate in outline. But the discoidal and oval types also occur, as witness figs. 28 and 77. Nothing could be plainer than that fig. 34 (A. Dn) was made for the purpose of detaching the flake with a curved edge, the outline of which is marked by the large facet in the right-hand figure. The same purpose is evident in fig. 34a, though here success was very partial, the force of the blow only travelling two-thirds of the distance across the core. In 34b, again, the flake which was removed from the left-hand side of the right-hand figure was evidently smaller than the artificer intended, though it is as large as some which were utilized on this site. The number of cores both on the two Wiltshire sites and at Grime's Graves is enormous.

Many of them are far ruder than those now under discussion. They are of a large variety of kinds, and some have the crust left remaining on the whole of one face. Many of them would, at first sight, seem to have served no useful purpose whatever. But it must be remembered that in numberless cases failure would be met with, and no decent flake or facet would result. This is not surprising at Avebury, where the material is small and poor. It happened at Grime's Graves also often enough. Even with good material, want of skill in some instances, and less perfect portions of a flint in others, tended to it. Moreover, the ancient flint-chipper would do what his modern successor does. A modern Brandon flint-knapper quartered a block, and struck off flakes from a piece, to show the author his method.



Fig. 34 a.

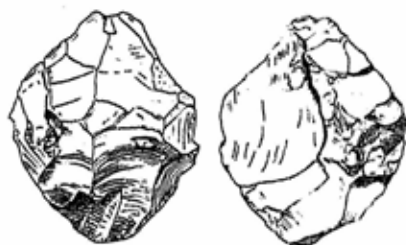


Fig. 34 b.

The latter has the small remaining portion, or core, which the knapper rejected. The two flakes which came off it were useless, but he tried it, nevertheless, on the off chance, presumably, of getting something out of the last two blows. The core now stands in the author's collection beside two prehistoric specimens which are exact doubles of it.

Fig. 35 is a common type in the neighbourhood of Avebury. The likeness between the specimens figured and that in the *Report* is complete. Some of these implements are cutting tools; others were for scraping.

In fig. 36 we meet once more, as in figs. 19 a (A. Dn), and in the comparisons from A. Dn with figs. 21, 23, 28, G. G. *Report*, with one of those implements which, when considered along with the whole series, make it impossible to think any longer that the Avebury and Grime's Graves industries can be other than Neolithic, or later. The likeness between the specimens, figs. 36, from the two sites, is perfect, both in manner of chipping and in outline. Neither could have been used at its ragged base as a celt. The Grime's Graves implement evidently

has a good cutting-edge at its upper end. That from Avebury is ground on both faces at its pointed end; the edge whereof is, also, smoothed by grinding. It may have been used, as Prof. Balfour suggests that the 'Picts' knives' were used, viz. for skinning animals: to push the skin away from the flesh.

Tortoise cores are abundant at Avebury Down; and, inasmuch as they are part and parcel of the industry which includes cores, scrapers, etc., made from polished celts, it is manifest that this method of producing flakes was not confined to a Palaeolithic Cave period. The Grime's Graves specimen is 'unstruck'. Off that from Avebury a flake has been taken, but not a very



Fig. 35.



Fig. 36.

successful one (fig. 37). Instances of unstruck cores can be produced from Avebury Down.

Square-ended scrapers occur at Avebury Down precisely similar to fig. 40, *G. G. Report*.

The same remark applies to the steep-ended, pear-shaped scraper, fig. 42, *G. G. Report*. Some specimens even have overhanging ends.

An ovate flake-implement, from Avebury Down, is like enough to fig. 43, *G. G. Report*. In both specimens there is a tendency to square-endedness. The type seems to have been a favourite one at Avebury Down.

The figs. 44 need no comment. They tell plainly enough the same tale as other types already dealt with.

Once again, fig. 46—not the only specimen from Avebury—shows another 'Cave type' that does not belong exclusively to the Cave division. A second, not figured, is but slightly chipped

on the upper part of the curved back, the middle of the back being ground smooth by rubbing.

Figs. 47 are characteristic of this industry. Three other specimens from Avebury are notched at the ends and one at the side also.

Fig. 48 from Avebury differs from the Grime's Graves example only in having some of the crust remaining, which is practically no difference at all. It happened to be convenient and labour-saving to leave it on.



Fig. 37.

Another specimen, on the other hand, is chipped out all over, but has a blunter point, which is smoothed by rubbing. The same phenomenon is seen on others from Windmill Hill.

There are three examples from Avebury in the author's collection of the type of fig. 49 (G. G. Report).

It ought to be particularly borne in mind that the *raison d'être* of any special feature of the less highly finished, sometimes even of the more highly finished, tools, is not one and the same in all the specimens of one kind.

Because, for instance, a number of one species is found with a spur at one side, it does not follow that in every case the spur was intentionally produced with a view to its use. That this was so sometimes, for the purpose of shallow boring, seems evident. In other instances, the projection may have been left after the edge on each side of it had been worn away by

scraping, the flint being held first by one end and then by the other; in each case, the wearing away not impinging on the small space remaining in the middle of the edge, where, con-



Fig. 44.



Fig. 46.



Fig. 47.



Fig. 48.

sequently, a spur was left. The conical 'implements', figs. 51, are clear instances of the projection having been accidentally formed in the striking of flakes off the core; whilst fig. 52, *G. G. Report*, and several from Avebury Down, were apparently made with intention for shallow boring, or for scraping marrow out of a split bone. Such specimens as fig. 53, *G. G. Report*, which occur also at Avebury Down, might have been used, after

Dr. Corner's suggestion, for some such purpose as cutting bark. Indeed, this may account for a large proportion of them.

Fig. 55 from Grime's Graves seems to be either a knife or a *racloir*; whilst its fellow from Avebury has been used for



Fig. 51.



Fig. 55.



Fig. 58.

scraping at the hollow part of the right-hand edge in the picture; the broad end being useless for chopping with, except that the edge of the central facet has been used for scraping.

A celt from Avebury differs from its counterpart, fig. 57 (G. G.), in having one rectangular corner; otherwise, both come under the same category of rough celts; both chipped in the

same free, loose style, with deep facets here and there. Fig. 58 has been already commented on. Fig. 59 from Avebury, found by my daughter Margaret, is a ground celt to which incurved sides have been given by later chipping. By the same means it is now slightly more convex on the face shown than on the other. The Grime's Graves example has, likewise, a slightly concave inner face.

As might be expected, having regard to the similarity of the industries in other points, cores with facets on the one face at



Fig. 59.



Fig. 61.

right-angles to those on the opposite face occur at Avebury, as well as at the Norfolk site.

The implements (figs. 61, etc.) are alike enough, save for the somewhat exaggerated broad end of the Avebury specimen. The type appears to be not uncommon, i.e. so far as outline goes; though the uses to which individual specimens were put seem to have been various. The Grime's Graves example is described as a celt. That from Avebury has a cutting-edge on the left of the picture, with a flat space on the right, to take the forefinger of the right hand.

Long scrapers have already been referred to. Fig. 62a is illustrated here on account of its remarkable fluted chipping on

the steep, horse-shoe end; evidently not confined to the Aurignac period, if the argument in this paper be correct. Fine blade-scrappers, like fig. 62, *G. G. Report*, occur at Avebury Down. A cutting tool from Avebury is very much smaller than the Norfolk specimen, fig. 64, *G. G. Report*.

The rude celts, or celt-like implements, such as fig. 66, *G. G. Report*, are curious, and probably characteristic of this industry. A similar implement occurs at Avebury Down. They are likely to have been insufficiently noticed up to the present.

The bold flaking of figs. 67 are similar, and the implement is characteristic. A pointed or a flattish end merely differentiate sub-species. Some tortoise cores resemble the Grime's Graves



Fig. 62a.



Fig. 67.

example very closely. An end-scraper from Avebury has flatter chipping at the end than the corresponding implements from Grime's Graves, fig. 68, *G. G. Report*. There is fluted work, however, all along the right-hand side; and the latter is common on the ends of Avebury Down scrapers; as also on many implements from Windmill Hill. The line of argument followed out in this paper necessitates the placing of all these examples in the Neolithic Age, or later.

Fig. 69, *G. G. Report*. A certain number of these 'segmental tools' were used for cutting or chopping. It was also, however, a very favourite form of core; the final attempt to get a flake being made by striking from the upper or thin end down one or other face. A notch was thus made on the upper edge of the core which quite unfitted it for cutting or chopping with. It is true that, in some instances, this might have been the result of an ineffectual attempt to make a straight edge. One or two good

flakes were taken off the corresponding example from Avebury; and then subsequent attempts proved abortive. Another has yielded several useful pointed flakes, such as are common in the neighbourhood. These were struck from the thin end. From the back, a broad, square-ended flake was obtained before the other face was flaked. It was struck off in the opposite direction to the flakes from the front. The edge at the top is irregular and useless.

Although fig. 70 in the *Report* can be paralleled from Windmill Hill, no *exact* likeness has yet come to hand from the Avebury site. This is undoubtedly due only to the fact that



Fig. 70.



Fig. 75.

a far greater number of chipped flints has been collected from the former site, during a greater number of years. The specimen figured (A. Dn) has the base running at a sharper angle, and is rougher than that from Grime's Graves, but is a rude representation of the same idea.

A scraper from Avebury Down is a replica of fig. 71, *G. G. Report*.

Plenty of instances of plunging flakes occur at Avebury (fig. 72, *G. G. Report*).

It seems to have been a favourite practice at the last-named site to utilize the cutting end of a polished celt as a 'toe-cap' implement, for use in the hand or fingers. These can be compared with the chipped example from Grime's Graves,

fig. 74, G. G. Report. The case made out in this paper thus receives yet another strengthening. There is a strong family likeness between the figs. 75. They are not celts; the appearance of the Norfolk specimen suggests use for cutting with the left edge, rather than as a celt. That from Avebury Down was also used for cutting.¹

Fig. 77 from Avebury nowhere has a useful edge; no trouble has been taken to fine down the irregularities of the periphery caused by blocking out the stone as a modified tortoise core. The removal of the flake from the largest and central facet has impinged on the already zigzag edge, leaving a jagged hollow there. On the other face a flake had already been obtained before the flint was reduced to its present size. After the removal of this flake the stone was chipped again and reduced



Fig. 77.

for the purpose of obtaining the flake from the largest facet shown in the picture. The Grime's Graves example, on the other hand, seems to be a cutting implement.

A number of flakes with graver-like extremities has turned up on the Avebury site. It is noticeable that certain flakes, some broad, which would be very inconvenient to hold as graters, have graver-like ends of a depth so great that it shows plainly that they were not shaped for graving. They may have been used as narrow chisels; being turned on their sides in use. This may account for some of the graver-like tools. Others may have received the *coup de burin* for a different purpose, e. g. for the production of a flat place to take the forefinger of the right hand in using the opposite edge for cutting. Such considerations, together with the paucity of their numbers, and

¹ Since this paper was read a wide scraper, similar to fig. 76, G. G. Report, has come to light, but without faceted butt or large bulb. That, however, is immaterial, inasmuch as faceted butts are as common as at Grime's Graves, and there is a sufficiency, also, of large bulbs.

the absence of any engravings, incline one to think that these tools, in these industries, were not designed for graving.

A strong feature of the implements at Windmill Hill is the number of small tools and arrowheads of tranchet type. They are important as strengthening the argument for a Neolithic date. That they are arrowheads is abundantly proved by the fact of their having been found in Egypt and Denmark still attached to the arrowshaft. They have, perhaps, not been sufficiently noticed in England, especially in cases where collections have been made by purchase from workmen or natives, instead of being personally gathered in the field. A number has been found at the Avebury site. A larger implement of this type seems to have been used in the fingers for some small planing work. Such implements are common in the district. The better known types of arrowheads occur on the Avebury site, though not so abundantly as on Windmill Hill.

An implement has been found at Avebury Down which does not exactly run parallel to any in the *Report*; but which, nevertheless, like several of them, viz. figs. 23, 26, 36, 54, and 55, was used for cutting, on the upper edge. In outline it resembles a celt with a curve in it. Like fig. 36 from Grime's Graves, it has a base which shows plainly, by its unfinished and useless condition, that the implement was not a celt.

In saying this, I do not mean to imply that celts of various kinds do not occur in considerable numbers at Grime's Graves; for they do; but only that these particular specimens are knives rather than celts. Certain other examples which I have seen may be both.

Among the flakes plenty of specimens have the bulb on one of the long sides. Some of them have facettèd butts. Facettèd butts on flakes (and they are equally numerous on scrapers) are so common on this site that one does not trouble to collect them all. The flakes which bear them resemble, precisely, specimens from Grime's Graves; where, also, the facettèd butt is very common.

An implement in the Devizes Museum, evidently from this site, is flaked on both faces, and bears a strong *superficial* resemblance to implements from the drift of the St. Acheul II period. At the upper left-hand edge, however, it is not finely finished off, as they are; and the right-hand side is left still rougher, and is useless for cutting. That the implement does not belong to the St. Acheul II period will, I think, be evident to those who have an intimate acquaintance with the implements of that period. It is undoubtedly Neolithic, or later. The lack of finish about the edges at the upper end, and the thickness

at the pointed end, would have profoundly dissatisfied a man of upper St. Acheul time.

Last, but not least, I come to an implement which was obtained after the greater part of this paper was written. It forms a splendid keystone to the arch which I have been building. It is a long scraper. Long scrapers are hailed by the advocates of the Cave division theory as belonging, without doubt, to one of the periods of that division of prehistoric time. Further, the chipping at the horseshoe end, like that on so many scrapers (long and short) from Avebury and Windmill Hill, is *fluted*, after the manner of Aurignac scrapers. But the present specimen has been made from a flake taken off a polished celt!

Even if small amounts of polish should, hereafter, be forthcoming from Palaeolithic sites, it is inconceivable, after all that is now known, that highly finished polished celts should be found to be characteristic of any Palaeolithic period; whereas there is plenty of evidence (e.g. from Thessaly, Mesopotamia, etc.) that they are typical of Neolithic and later times. Some of those rechipped at Avebury Down are of late Neolithic or dolmen pattern.

One or two more notes remain to be added before drawing the final conclusion.

A large proportion of the lumpier specimens have been referred to by the author, on this and other occasions, as cores. It is not meant to imply that all the individual flints of any one type necessarily come under that category. That idea is rather to be avoided. There is a natural tendency at first to assign a single and implemental use to chipped flints of one type; or, sometimes, on the other hand, to class all specimens that cannot be immediately understood as wasters. This, also, is to be deprecated. There are in reality few in which some special intention cannot be seen, after long study and comparison. Some, indeed, fulfilled double functions, e.g. of both core and chopping tool.

Some prehistorians find a difficulty in the way of accepting the Grime's Graves and allied surface industries as Neolithic, or later, owing to the fact that they contain types which occurred in some Palaeolithic period, and which almost or quite dropped out in other and later periods of the same age. It has already been shown that continuity between Palaeolithic and Neolithic man must have been maintained somewhere in the world. And it should be pointed out that the true prismatic core has not been shown to be a Neolithic product, whilst it did occur in some periods of the Cave division of the Palaeolithic Age. Yet Mexican prismatic cores are readily accepted by all as of post-

Neolithic date. That being so, there should be no difficulty in accepting the forms at Grime's Graves as Neolithic, though they may bear a certain resemblance to some comparatively early Palaeolithic types.

It has been remarked that no arrowheads have been found at Grime's Graves among those graves that are visible at the surface, whereas they are numerous at Windmill Hill, and not uncommon at Avebury Down. But it must be remembered that they resemble certain kinds of butterflies, in that they are very local, even in one district, or one field. Further, that arrowheads are found (with a blue patina) on the fields close to Grime's Graves. And, thirdly, that the types from the two Wiltshire sites, as well as, it is believed, from the fields at Grime's Graves, are such as are not found in the Cave periods.

It has been argued by the supporters of the Le Moustier-Aurignac Age for Grime's Graves, that the large number of scrapers found at Avebury Down and Windmill Hill constitute a difference in those industries from that of Grime's Graves. Not much time has been spent by the author at the Graves; yet some half-dozen scrapers have been found by him. This postulates a considerable proportion as against the other kinds of finished tools. Moreover, 'horseshoe' scrapers are numerous on Santon Warren, close by. There seems every reason to think that the chipped flints there (i.e. the blue-patinated and the more lustrous specimens) are of the same age as the Grime's Graves flints. Implements, etc., on the surface above the chalk, at and near the Graves, are white. Immediately the area of the sand is reached (in one instance almost within the wood in which the Graves are, and at some spots within the area of the Graves), the flints all seem to be blue. They are scattered, without break, from the Graves onwards over the neighbouring country for many hundreds of yards, at least. As at Avebury Down, the nearer the source of supply (in this instance Grime's Graves), the larger the chipped flints; and the further away, the smaller they are. It would be very extraordinary if implements of Grime's Graves age were strictly confined to the area of the Graves and the north and west fields; and those of another age, on Santon Warren, were, except for one or two small spots at the edge, completely wanting in the said area. But if the Santon Warren and Grime's Graves flints are of one age, then it is abundantly clear from the former that scrapers were made in large numbers by the people of the Graves industry. It may be added, in regard to the patination, that the Windmill Hill flints are white; but, at the foot of Windmill Hill, implements of the same industry are blue and iron-stained, from lying in a different, i.e. in this instance, a clayey soil.

Supposing that the people did not make use of a larger number of scrapers at the Graves, whilst many were used a little way off, this need occasion no surprise. There are plenty of instances to show that even so common an implement as this was sometimes local in its occurrence, compared with the more diffuse appearance of less finished pieces of the same date. Scrapers are scattered in a fairly general manner over the top of Hackpen Hill, North Wilts.; but on one spot twenty yards or less in diameter, considerably more than fifty specimens have been picked up. It was apparent that they were both made and used there, and that groups of flakes and scrapers had come off the same blocks of flint.

The series dealt with in this paper is by no means exhaustive, either of the different kinds of chipped flints, varieties of flakes, etc., found at Avebury Down, or of the close likenesses which have been found to exist between them and specimens from Grime's Graves. With the exception of a few additional implements referred to at the end of the paper, I have confined myself to comparisons with the illustrations in the Grime's Graves *Report*. Even within these narrow limits, the evidence for the practical identity of the industries from the two sites is very strong. Further, polished celts have never yet been found in such circumstances as to warrant their being regarded as of Palaeolithic Age; and no one is bold enough seriously to consider them as such. They have never been found in deposits of the Cave periods in France.

I maintain, therefore, that in view of the identity of a large proportion of implements and tools from Grime's Graves and the Avebury sites; of the homogeneity in style and method of chipping (and, circumstances being equal, in patina, also); and of the numerous instances, on the Wiltshire sites, of tools made from broken-up polished celts, the said tools differing in no wise from the rest; together with the finding of pieces of polished celts at and near the Graves, besides two whole basalt celts, one actually in a gallery; in view, also, of the mammalian, botanical, and conchological evidence from Grime's Graves; there are overwhelming reasons for regarding that site, and the flint implements found there, as not earlier than the Neolithic Age. And I suggest that they should, for the future, in view of this evidence, be definitely accepted as such.

Description of the Figures.

Fig. 19 a. Scraper made of a flake from a polished celt: outer face and side view.

„ 20. Flake with zigzag ridge: outer face and section.

Fig. 21 *a*. Hand-celt, with cutting edge *en biseau* : outer face and side view.

- „ 23. Hand-celt, made from a polished celt.
- „ 26. Narrow celt.
- „ 27. Chipped flint with one flat face; object unknown : outer face and side view.
- „ 28. Disc-shaped core.
- „ 28 *a*. Disc : made from a piece of a polished celt : face view and section.
- „ 29. Celt with some affinity to a Danish tranchet celt.
- „ 31. 'Dolphin' type : front and side views.
- „ 34. Tortoise core, with superficial resemblance to an implement of Drift type : face views and section.
- „ 34 *a*. An unsuccessful tortoise core : face view.
- „ 34 *b*. A partially successful tortoise core : face view.
- „ 35. Scraper used at the side.
- „ 36. Knife-like implement : ground on both faces and smoothed at the edges, at the upper end.
- „ 37. An unsuccessful tortoise core : face views and section.
- „ 44. Flake implement.
- „ 46. Flake with thick, curved back and straight cutting edge.
- „ 47. Flake with spurs and notched sides, and faceted butt : face views.
- „ 48. 'Prismatic' tool : outer face and side views.
- „ 51. Core with spur : side view.
- „ 55. Implement used as a side scraper.
- „ 58. A core : face views.
- „ 59. Polished celt, with slightly incurved sides due to later re-chipping.
- „ 61. Cutting implement for use in the fingers.
- „ 62 *a*. Scraper with steep end and fluted chipping : outer face and side views.
- „ 67. Flake implement.
- „ 70. Sub-triangular implement.
- „ 75. Cutting implement.
- „ 77. Modified tortoise core.

Mr. REGINALD SMITH thought most would accept the principle that primitive flint-industries were conditioned by the size of the raw material available; but there were notable exceptions. In the Tardenois or pygmy period, minute implements were produced when it was possible to use the nodules for larger and more usual forms; and even in the same cave, with the supply of flint presumably constant, different strata often showed a marked preference for a particular size in any given period. The exhibits themselves presented such a contrast, and as the localities in question were within sight of one another and occupied about the same time, the same supplies of flint were no doubt available. Hence it was a question whether such industries as Grime's Graves and Windmill Hill could be profitably compared. Superficially they represented opposite extremes in the matter of size. Again, similarities might be detected between Windmill Hill specimens and the Grime's Graves illustrations, that might vanish when the actual specimens were

placed side by side; and if there were many resemblances, there were also plenty of differences. The association of types was a leading consideration, and the whole complex counted for more than the coincidence of units. The National Museum of Wales at Cardiff had recently acquired a very similar collection from Wallingford, Berks., with a still greater proportion of mutilated polished celts. That and the Wiltshire sites were no doubt eminently suited for human occupation, and there was nothing to prevent successive generations leaving flint implements on the spot. Six or eight inches of soil was hardly capable of stratification, and the plough had long ago destroyed any sequence. Hence there was a strong presumption that the exhibits, in spite of their uniform patina, represented a series of occupations, involving changes of type. The brutal re-chipping of polished celts, chiefly of pointed oval and oblong sections, was difficult to explain, as it evidently took place in late neolithic times when polishing was the recognized method; but the beginnings of polish, as seen on some specimens exhibited, might go back into the palaeolithic (cf. *Proceedings*, xxxi, 50). The tortoise-core varied considerably in size, but was not proved to belong to any period but Le Moustier; and the Icklingham example reminded him that Dr. Sturge had found a large number of Cave-period specimens on the surface in that neighbourhood.¹ Last November Dr. Peake had found at Grime's Graves several very large pieces, including two large flake-implements almost identical with Northfleet specimens in the British Museum; and since the Grime's Graves *Report* was published, the excavation of St. Brelade cave in Jersey, of Le Moustier date, had furnished several convincing parallels (*Archaeologia*, lxxvii, 75). The peculiar flaking on the flat underface of planing tools, starting from the cutting-edge, resembled the *écaillage* or splintering noticed in the late Aurignac stratum of Coumba del Bouïtou, Corrèze,² and suggested caution in ascribing the whole series from Windmill Hill to the 'surface' or Neolithic period. Mr. W. G. Clarke's eight points had all been considered in preparing the *Report*, but the flint-evidence had to be presented independently, in spite of many points of disagreement with evidence from other sources. Of the five alternatives offered in the *Report* Mr. Kendall had, in the speaker's opinion, chosen the wrong one; but the problem was not yet solved, and there was nothing to lose by an open discussion in the light of finds elsewhere. There was a good deal to be said for the survival theory, but if tortoise-cores, faceted butts and gravers persisted from the early Cave-period into late Neolithic or even Bronze

¹ *Proc. Preh. Soc. E. Anglia*, vol. i, p. 210.

² *Revue de l'École d'Anthropologie de Paris*, 1906, p. 170.

Age times, there should be specimens on every excavated site and on many a ploughed field; and their conspicuous absence in most cases was all in favour of the orthodox view that highly-specialized types were in the main restricted to well-marked periods. The whole modern classification of the Stone Age was based on that assumption.

Mr. DALE said the author had undertaken to correlate two sites that were to a certain extent different in essentials. The Grime's Graves industry was subterranean, and was bound up with the mining of fresh flint that retained a large percentage of water and was easy to work. Nothing of the kind had been noticed at Avebury. An interesting point was the re-trimming of polished celts for second-hand use: his own collection contained many such specimens, which had once been hafted and broken in use, but he was not converted to the theory that they were broken intentionally, except perhaps for funeral purposes. The trimming of broken celts was only to refit them for the haft. He had first visited Windmill Hill and Avebury in 1887, and from the vast quantity of implements concluded that it had been a distribution centre, perhaps during a considerable period. Among the exhibits he noticed a good example of the Cissbury celt, but there was strong reason to regard the series as a mixture of many industries. A striking characteristic of neolithic work was its infinite variety, which suggested many changes of fashion, extending over many centuries.

Sir HERCULES READ remarked on the amicable tone of the discussion and thought there was a prospect of agreement, both sides desiring to discover the truth. Without lantern slides it was almost impossible to convey to the meeting the salient points of flint specimens, as the lighting of the room suppressed the modelling. It was desirable to choose the best analogy available, but Mr. Kendall had preferred Grime's Graves, a disputable site, to Northfleet, which was unobjectionable. No horizon could be established in a few inches of soil repeatedly disturbed by agriculture; and he regarded the series on exhibition as a mixture representing more than one period and separated by considerable intervals of time. Any site placed in comparison with Grime's Graves should be of unimpeachable date, and, on the author's own showing, Avebury did not possess that qualification. In Shetland there was no doubt that the 'Picts' knives' were used for flenching.

Mr. KENDALL replied that it would take too long to deal in detail with the points raised in the discussion, and felt handicapped by his inability to take the Fellows over the ground.

A considerable proportion of the local flints were re-chipped, and some showed three periods of working. Double patination was not always trustworthy, but he could not resist building a theory on it in that case. He had brought for exhibition one rough and unpatinated specimen that was later than the white series, and found that implements in the six or eight inches of soil only patinated down to a certain period. A specimen found near Avebury was lozenge-shaped, with blue chipping all round the centre, which was an older polished surface. It was easy to distinguish in the field flints of the surface period: they were of a certain patina and style, quite distinct from the series found in connexion with drift, with yellow or greenish patination. At Avebury there was no flint to mine, and therefore no opportunity of emulating the Grime's Graves workers. A committee had been formed to excavate near Avebury, and nothing he had heard convinced him that the flints were earlier than late Neolithic.

Thanks were ordered to be returned for this communication.

THURSDAY, 13th FEBRUARY 1919.

Sir ARTHUR JOHN EVANS, Knt., D.Litt., F.R.S.,
President, in the Chair.

J. E. COUCHMAN, Esq., F.S.A., Local Secretary for Sussex, read the following paper on Neolithic Spoons found in Sussex:

The two Neolithic clay spoons exhibited were found about eighteen years ago on the boundary of the parishes of Hurstpierpoint and Clayton in Sussex. The main road from Hassocks Railway Station to Hurstpierpoint runs east and west parallel to the Downs and about one mile from their foot, on a ridge of sand sloping southward. Within two or three hundred yards of the Ham Farm has been found a continuous series of relics from an early date. Pygmy flints have been found in fair numbers; Bronze Age urns, one of the Ashford type and others of the conical shape, have been unearthed; and a Roman road twenty-seven feet wide has a burying-ground by its side. The Ham farmhouse suggests the Heim of Saxon times, the Hill of the

hundred adjoins the house, with the field of the hundred settles not far removed, and of later days there remain the fulling mill field, the bull-baiting field and the bear stakes.

Some four hundred yards west of the Ham farmhouse and about one hundred yards west of the Roman road, just at the top of a hill known as Wickham Hill, are the cross-roads. That running north and south is, I believe, an old British road, and is the boundary of the parishes previously mentioned; about 150 yards from the cross-way on the south side is a disused sand-pit, on the edge of which a rabbit had scratched out the two spoons. It is to be regretted that some effort was not made at this time to discover the history of these strange things, as three or four years afterwards, when they were understood, it was impossible to identify the exact spot, and excavation led to no result.

One of these spoons (fig. 1 *a*) is of singular shape, and but for its association with the other would scarcely have been so described. The handle is cylindrical, slightly tapering at the end, the mean diameter is about $\frac{3}{4}$ in., and its length $4\frac{1}{8}$ in. The bowl was fashioned by the finger, and the end of the bowl is turned up at right-angles to the handle. Both spoons are made of dark soft clay mixed with particles of mica or quartz.

The second object (fig. 1 *b*) is typically a spoon moulded by hand, the bowl was shaped by the thumb, the groove left by the thumb-nail in the paste being easily discovered. The width across the bowl is a little more than $1\frac{1}{2}$ in., and the total length of the spoon $4\frac{1}{2}$ in. The handle is concave on the front, having been smoothed down by the finger when the paste was soft; the back of the handle is round, the spoon tapers from the widest part of the bowl to the end of the handle, which is round. These spoons are now in the British Museum.

The distribution of these spoons in Europe is irregular, and they generally come from the south. A few have been found in Spain, and two in Asia Minor, while the more northern parts such as Holland, Denmark, and Slesvig provide each less than half a dozen, and to these may now be added the two found in Sussex.

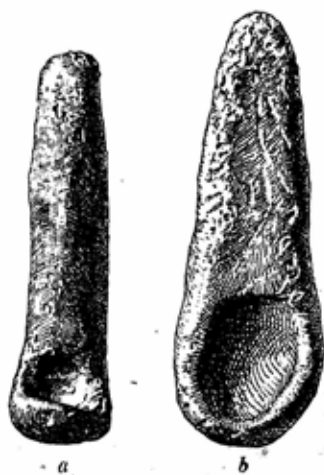


Fig. 1. NEOLITHIC CLAY SPOONS
FOUND IN SUSSEX ($\frac{3}{4}$).

The more important centres are the Camp de Chassey in the Department of Saône-et-Loire, the Grotte de Nermont at St. Moré, and Priesterhügel in Transylvania, in which places clay spoons have been found in considerable numbers.

The material varies little over the whole area, and usually contains quartz or mica grit. The shapes differ considerably, the handles vary in length, and some are made with a socket at the end of the bowl into which a wooden or horn handle can be inserted. Some handles are curved, and the bowls are either round or oval, sometimes decorated, as in the Slesvig example, with an incised pattern, or as in those of a later date at Priesterhügel with a painted geometrical ornament covering the entire handle.

M. St. Venant¹, in a very interesting history of the spoon, says that nine-tenths of his collection came from the Camp de Chassey, and that he regarded this as the principal centre of manufacture. They are found, he says, in Lake-dwellings, in grottos of neolithic date with cremated interments, but always in stations or workshops of the Neolithic period. By searching the museums of France and the collections of other countries, he discovered more than 650 spoons of different types. Many spoons made of horn have been found associated with neolithic interments: some of these he illustrates, but does not mention how many of the total of 650 were of clay or of horn. One with a very bent handle was found in a neolithic grave north of Uzès² in the province of Gard.

MM. Cartailhac and Chantre³ illustrate a spoon from the Grotte de Nermont at St. Moré; it is $8\frac{1}{2}$ in. in length, of terracotta, with an oval bowl and more or less parallel handle square ended; it was found in 1878 with other items of Robenhausen date. This cave has provided so many specimens that it has been called the Grotto of Spoons.

Two illustrations of a similar type of spoon, from the Grotto of Chiaristella in Sicily, now preserved in the museum of Palermo, are given by G. Wilke in his work on the megalithic culture of West Europe.⁴

Pleyte⁵ illustrates two clay spoons, one with the handle broken off, the other with a long bent handle: they were found at Oostergo in Friesland, Holland, and are now in the museum at Hanover.

¹ J. de St. Venant, *La cuillère à travers les âges*.

² Frère Sallustien Joseph, *Grotte néolithique de St. Vérédone, Canton d'Uzès*, Nîmes, 1904, pl. 1.

³ E. Cartailhac et E. Chantre, *Matériaux pour l'histoire primitive et naturelle de l'Homme*, pl. 513, fig. 71.

⁴ G. Wilke, *Südwesteuropäische Megalithkultur*, p. 81, p. 57.

⁵ Pleyte, *Nederlandsche Oudheden, Friesland*, pl. 10.

A spoon, and a bowl of another, illustrated from Priesterhügel in Transylvania¹ are similar to the rude clay spoons found elsewhere with neolithic interments, and they form part of the large number found in this district (Déchelette says 100²). This total, however, includes a very interesting series belonging to a later development, which were found in a different stratum from that of the two spoons previously mentioned. This series presents a remarkable advance in technique. The handles are cylindrical, and were probably burnished before the paste was baked, to receive a painted geometrical pattern. Many are pierced at the end for hanging, but unfortunately all the bowls are broken.

The brothers Siret,³ speaking of similar discoveries in Spain, say that at Zapata, four kilometres west of Ifre, and north-west of the station of Parazuelos, there were found two fragments of spoons in terra-cotta, and the finds led to the discovery of thirty-



Fig. 2. SPOON FOUND IN CAVE OF ARENE CANDIDE, LIGURIA
(AFTER MORELLI).

eight burials, all inhumations. At El Argar several fragments of spoons were found, a few sufficiently complete to indicate their original size. One had a large bowl and a very short handle, the latter being broken; and they suggest that it might have been used as a lamp. The longest is four inches, the shortest with scarcely any handle is about two inches. El Argar and Zapata lie near the coast between Gibraltar and Cartagena.

At La Cueva de los Murciélagos, three kilometres from Albuñol, two graves were found with a horn spoon in each, one perforated at the extremity of the handle.

Another spoon of clay with a very long bowl and short handle is illustrated in Morelli's *Iconographia* (fig. 2).⁴ It was found in the cavern of the Arene Candide in Liguria. The spoon in the

¹ *Mittheilungen der Anthropologischen Gesellschaft in Wien*, xxx, p. 199, figs. 153, 154, 155.

² Déchelette, *Manuel d'Archéologie*, vol. i, p. 559.

³ Henri et Louis Siret, *Les premiers âges du métal dans le sud-est de l'Espagne*, pl. 23, fig. 78.

⁴ Morelli, *Iconografia Ligustica*, 1, pl. xci, fig. 4.

drawing, which I assume to be full size, is $2\frac{7}{8}$ in. in length. Morelli says, 'It is of clay, rather fine and homogeneous, abounding in small splinters of mica. Before it was baked it was carefully smoothed with the fleshy part of the finger-tip, as the numerous marks of finger-nails remaining on it testify; it is furnished with a small flattened handle and is much worn at the part opposite the handle.' A similar object, $3\frac{3}{8}$ in. long, was found in the cavern of the Pollera, and Istria has furnished several. At Lagozza in the commune of Bensale, Province of Milan, was found 'a small spoon of terra-cotta, black and sparkling'.¹

More recently a large clay spoon (Haderslev Museum) was found in the northern chamber of one of the Giants' graves at Over-Iersdal (fig. 3), with other broken pottery.² Round the inside of the large oval bowl are rows of decoration incised with the edge of the cardium or cockle shell; fragments of other kinds of

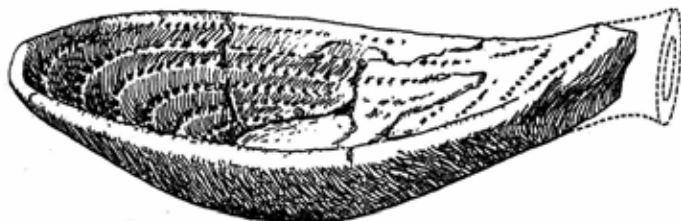


Fig. 3. CLAY SPOON IN HADERSLEV MUSEUM ($\frac{1}{2}$).

pottery from the same place show a similar ornamentation in horizontal lines and chevrons. There is a hole in the end of the shank to receive a wooden handle, and it is the largest spoon to which I have found a reference (length, $6\frac{1}{2}$ in.).

Spoons illustrated³ from Sarka, near Prague, Bohemia, follow the ordinary model; but nothing is stated except that all the objects on the plate of illustrations were found together and are of the late Neolithic period (fig. 4).

Dr. Sophus Müller⁴ speaks of a spoon of clay with a round flat bowl, and with a socket in which to fix a wooden handle, similar to that found in a Giant's Chamber in Holland. This also was found in a grave.

Southern Bulgaria is represented by two small specimens,⁵ and

¹ *Bullettino di Paleontologia Italiana*, tav. ii, fig. 4.

² *Mémoires de la Société Royale des Antiquaires du Nord*, 1914-15, fig. 61, Copenhagen.

³ Pič, *Cěchy prědhistorické*, 1, pl. 71, fig. 17, and pl. 41, fig. 9, 10.

⁴ S. Müller, *Ordning af Danmarks Oldsager, Stenalderen*, No. 238-9.

⁵ *Prähistorische Zeitschrift*, vi, 1914, 84, Southern Bulgaria.

my last quotation is from Schliemann¹: 'very curious are the little terra-cotta spoons, which, as they are so slightly baked, may have been used by the Trojan metallurgists; similar spoons are very rare at Hissarlik'. These spoons (fig. 5) were found in the ruins of the second city, and Schliemann further says that a broken

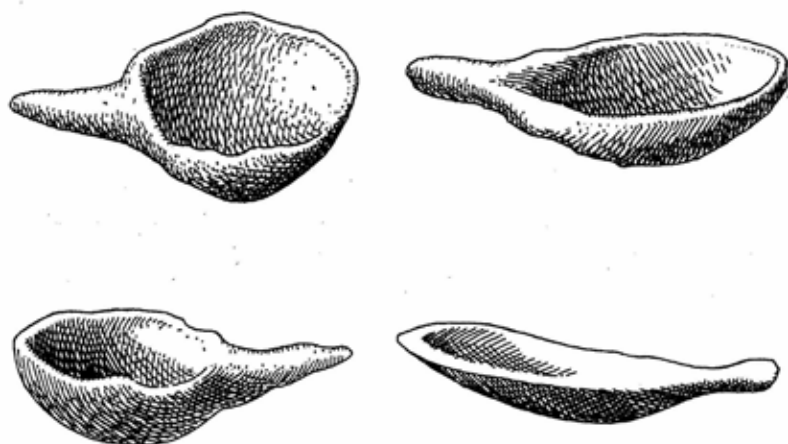


Fig. 4. SPOONS FROM SARKA, BOHEMIA (AFTER PIČ).

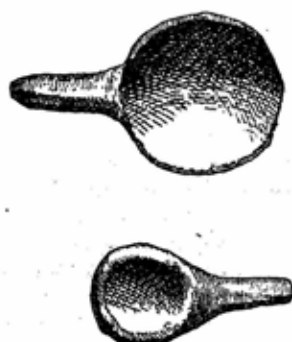


Fig. 5. SPOONS FROM TROY, 2ND CITY, AFTER SCHLIEMANN ($\frac{1}{2}$).

spoon of identical shape was found in a settlement of the Stone Age at Inzighofen. Three other specimens were found at Dozmat in the county of Vas, and at Tisza Ugh in the county of Heves in Hungary. A broken terra-cotta spoon was discovered at Szihalom, and is exhibited in the museum at Buda-Pesth. Two were found in a lake-dwelling of the Stone Age at the station of

¹ Schliemann, *Ilios*, p. 410.

Auvernier, Lake of Neuchâtel, and at the station of Gérofin in the Lake of Biennne.

There are a few other references,¹ some of which have proved inaccessible; others no doubt exist but are unknown to me; but the above are sufficient to show that these spoons are found throughout middle and southern Europe, in fact from Spain to Asia Minor. They appear occasionally in pairs, but so indefinitely that nothing can be deduced from the fact. There seems, however, general agreement on two points: (1) that these clay spoons belong to the late Neolithic or early Bronze Age; (2) that in nearly all cases they have been found with interments, and therefore formed part of the obsequies of the dead.

In ruins of lake-dwellings, Lochlee Crannog, Ayrshire, horn spoons were found; and W. G. Wood Martin, in *Pagan Ireland*, describes a small spoon made from the vertebra of some animal.

Whatever burial rite may have been connected with these spoons, the transition from this rude type to the carefully-modelled and elaborately-painted spoons at Priesterhügel suggests continuity through a lengthened period, and we might even look for its survival in the Bronze Age.

In the British Museum are two bronze spoons, one found in the Thames, and one in Thames Street, London, also a pair found at Crosby Ravensworth, Cumberland.² There are two similar spoons from Weston, Bath; two from Penrhyn, Cardiganshire; two from Llanfair, Denbighshire; and two pairs at Dublin. Two found at Pogny, Marne,³ in the grave of a woman, lay one within the other inside a small vase; and two found at Upper Walmer, Deal, with a skeleton laid at full length north-east by south-west, were on either side of the skull.⁴

These bronze spoons are too shallow to have held more than a very insignificant quantity of liquid.

Of the eighteen there were no less than seven pairs, one spoon of each pair having a cross extending to the edge of the bowl; the fellow is plain but has a hole drilled close to the margin, always on the right side of the spoon as drawn. The two from London were odd spoons found at different places. The two from Pogny are slightly different in arrangement: one quite plain with no hole, and its fellow with a cross which is pierced in the centre.

¹ *Zeitschrift für Ethnologie*, 1873. *Revue Archéologique*, xiv, 2nd series, 1866. Marchesetti, *Caverna di Caprovizza presso Trieste*, p. 29, pl. v, fig. 17. J. Teutsch, *Die spätneolithischen Ansiedlungen mit bemalter Keramik; Mittheil. der prähist. Com. Wien*, 1903, p. 371. Hoernes, *Neolithische Wohnstätten bei Troppau*, p. 411.

² *Arch. Cambrensis*, 3rd ser., viii, p. 208; and *Arch. Journ.*, xxvi, p. 52.

³ Déchelette, *Manuel d'Archéologie*, vol. 2, p. 1276.

⁴ *Arch. Cantiana*, xxvi, p. 12.

The pairs of spoons from Pogny and Upper Walmer clearly indicate that they served a similar purpose to the spoons of clay, and it is possible that these bronze objects were a metal development of the simple neolithic type of clay. There is a considerable hiatus between the highly decorated spoons of Transylvania and those of Celtic bronze, but we may hope some day to discover the intermediate types.

The second part of my paper refers to bronze and miscellaneous objects kindly lent for exhibition by Mrs. Weekes, of Hurstpierpoint.

The two bronze loops (fig. 6) are identical in shape with sixteen others, which appear to have been of local manufacture, as thirteen of the total were found in, or within a few miles of, Brighton. Three were found at Handcross, and of the remaining two there is no record, but they were thought to have been found in Surrey.

Of the two loops exhibited, one is a coiled rod of circular section 9 mm. or $\frac{3}{8}$ in. in diameter. The loop is nearly circular, being $2\frac{3}{4}$ in. by $2\frac{1}{2}$ in. across the inside. The ends are bent over and hammered, and there is no decoration. It was once well covered with green oxide, much of which has now disappeared. In the second case the rod is of quadrangular section, 7 mm. between the flat faces; the diameter of the loop is $2\frac{7}{8}$ in. by $2\frac{1}{2}$ in., and the ends are treated in the same way as before. The decoration on the angle of the rod can only be seen at one or two places, and is most noticeable where the end of the fastening turns over the loop proper; it resembles the teeth of a fine saw partly filed down. It is similar in this respect to all the other loops made of quadrangular rod, and its condition is like the first. These bronze loops were found about seventy years ago at Pycombe, west of the Cowdown. About 1846 the Sussex Archaeological Society was founded, an event which may have been the cause or the result of much archaeological activity, and the opening of many of the tumuli on the Downs may possibly account for several Bronze Age finds about that time.

The remaining sixteen loops have been somewhat widely dispersed, but the whole may be identified as follows:

- 2 found at Pycombe (*Sussex Arch. Coll.*, vol. viii, p. 285); now in possession of Mrs. Weekes, Hurstpierpoint.
- 3 found at Handcross (*Proc. Soc. Ant.*, Newcastle-on-Tyne, 1917); 1 in possession of British Museum; 1 in possession of Blackgate Museum, Newcastle-on-Tyne; 1 supposed to be in the Great Chesters Museum.
- 4 found at Hollingbury Hill, Brighton (*Sussex Arch. Coll.*, vol. ii, p. 267); British Museum.

- 2 found in tumulus near Lewes Road, Brighton (*ibid.*, vol. ii, p. 265, and *Alnwick Castle Museum Catalogue*, nos. 273, 274).
- 2 said to have been found in Surrey (*Surrey Arch. Coll.*, vol. i, p. viii); British Museum.
- 2 found at 133 Bonchurch Road, Brighton, 1 mile from Hollingbury Castle (*Proceedings*, xviii, p. 409); British Museum.
- 3 found at Blackrock, Brighton (*ibid.*, xxviii, 157); bought from the Greenwell Coll. by Mr. C. T. Trechmann, F.G.S.

These bronze loops belong to the third period of the Bronze Age (about 1000 B.C.).

There are two fine wire bracelets of somewhat similar design in the British Museum, one found in Heathery Burn Cave, co. Durham, the other in a little stream in Anglesey. There seems little reason to connect these objects except in point of age, the design is so primitive that it may as well have been conceived in Wales as in Sussex.

The brooch illustrated at the side of the loops (fig. 6) is of bronze, decorated with seven bands of lines encircling the body. It has a long catch at the foot, and one coil only of the spring at the head. The type is well known and may be dated about 800 B.C. It was found at Clayton, at the foot of the Downs, six miles north of Brighton, and may be added to the growing list of such discoveries in Britain.

Three bronze palstaves (fig. 7) are from different moulds; of the two larger, one is flat between the flanges; the other is concave, and was found on Clayton Hill. The third came from a large barrow south-west of the camp, on the Devil's Dyke at Poynings. They are each $6\frac{3}{8}$ in. in length.

The small palstave is $4\frac{1}{2}$ in. in length, and was found on Wolstanbury Hill. All three of these weapons belong to the middle period of the Bronze Age, contemporary with the loops.

The small vessel called an incense cup (fig. 8) was found in a large barrow on Clayton Hill. The height is $2\frac{3}{8}$ in., the diameter of the base $2\frac{1}{2}$ in., and of the mouth $2\frac{1}{4}$ in.; its profile is angular in the middle, where the diameter increases to $3\frac{1}{2}$ in.; the lower half of the side has twenty-two vertical incisions about one inch in length; the upper half is impressed with cord pattern very similar to that on a cup in the British Museum of the same type from Roughbridge Hill in Wiltshire.

Inside this cup was found a pendant of bright blue faience similar to those described by Sir Arthur Evans in February, 1908 (*Proceedings*, xxii, 124). It is described as quoit-shaped, with an attached loop, and an illustration is given in *Sussex Archaeological*

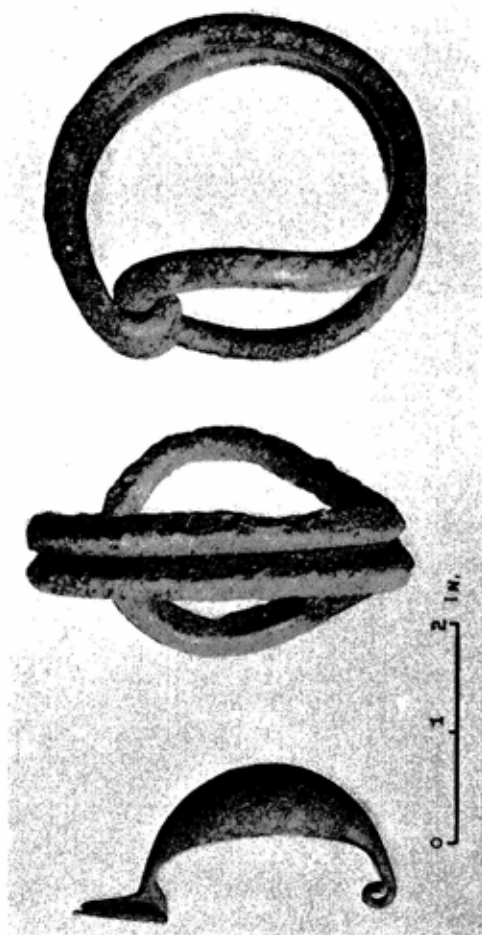


Fig. 6. BRONZE LOOPS FOUND AT PYCOMBE, AND BROOCH FROM CLAYTON, SUSSEX

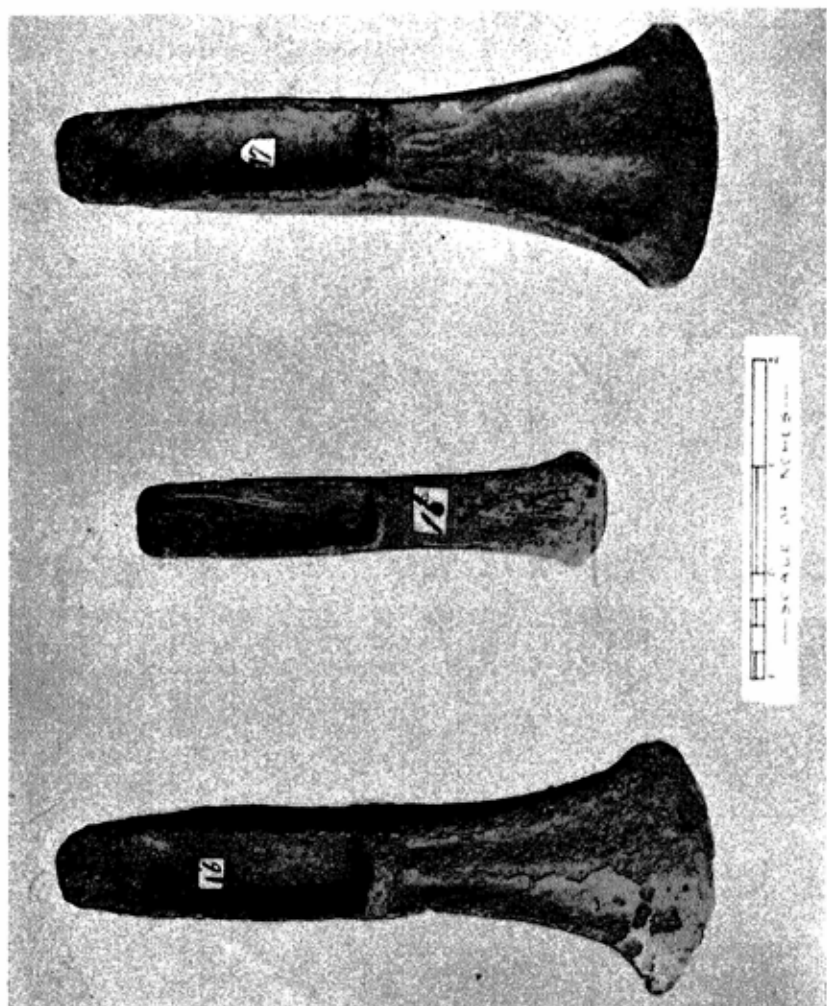


Fig. 7. BRONZE PALSTAVES FROM CLAYTON AND POYNINGS, SUSSEX

Collections, viii, 285. This pendant is of Egyptian origin, and Sir Arthur goes on to say that if these pendants and beads of the same material reached the Bronze Age inhabitants of Britain through Phoenician agency, it is highly improbable that this could have taken place earlier than 1100 B.C.

In conclusion, I wish to thank Mr. Reginald Smith for his

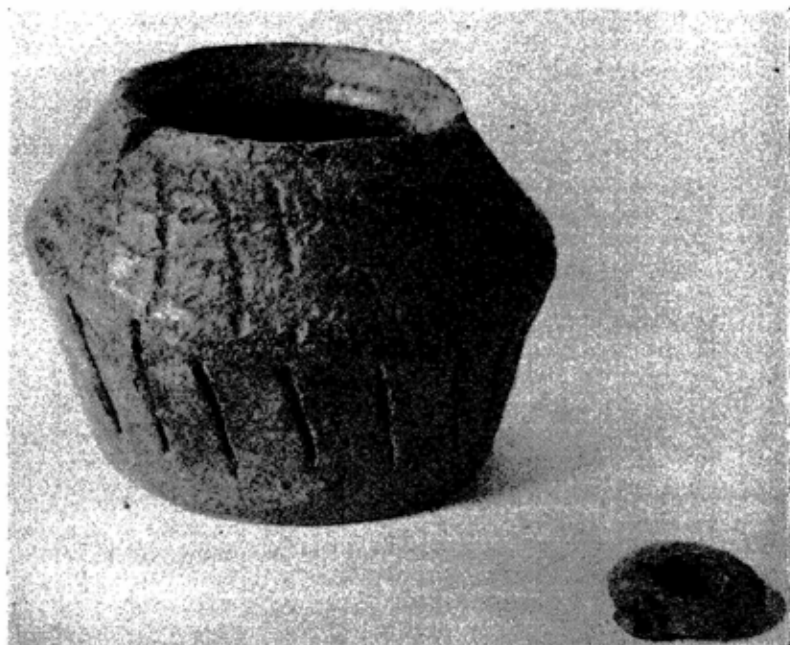


Fig. 8. INCENSE CUP AND PENDANT OF BLUE FAIENCE FOUND
AT CLAYTON, SUSSEX ($\frac{1}{2}$).

generous help on many occasions, and particularly for providing references and other material for this paper.

Mr. REGINALD SMITH drew attention to the occurrence in France of pottery spoons in burials after cremation : there was good evidence of that rite in the Neolithic period abroad, but in Britain the dead were not regularly cremated till the latter part of the Bronze Age. The horn specimen found in a beaker near Inverurie, Aberdeenshire,¹ suggested the ceremonial use of spoons in the early Bronze Age ; and if offerings of butter were

Proc. Soc. Ant. Scot., vii, 561 ; xvii, 456.



made in them, the continued use of *ghi* or clarified butter in southern Asia might be quoted as a parallel. One of the palstaves exhibited was said to come from a barrow: very few discoveries of the kind were recorded, perhaps owing to the introduction of cremation about the middle of the Bronze Age, when that type came into use. Another exhibit was of special interest as throwing some light on the chronology of the incense cup, and incidentally on the length of the Bronze Age in Britain. A similar ring with loop, of turquoise faience, had been found at Lewes, and beads of the same material had been connected by the President¹ with Egypt of the eighteenth dynasty (about 1500 B.C.).

Mr. DALE preferred the term palstave to celt, and thought the smallest was the earliest of the three. There was great variation in such implements, as the clay moulds were very fragile and seldom served more than once. The larger beads with central perforation he considered rather spindle-whorls.

The PRESIDENT was inclined to agree with regard to the neolithic date of the large family of spoons shown on the screen: in Crete they belonged also to the early Copper Age, and a deposit, evidently of votive character, consisting of a clay object shaped like horns, and a quantity of spoons or ladles also of clay, had been found there under a later settlement by an American explorer. In Troy they also belonged to the age of metal, but throughout Europe they were commonly neolithic. The absence of any associated objects in the present instance was unfortunate. He thought it dangerous to compare antiquities widely separated in time and space, and pointed out that fifteen centuries separated the pottery and bronze spoons of Britain. In thanking the author for the exhibition, he expressed his gratification that the spoons were destined for the British Museum.

MILL STEPHENSON, Esq., F.S.A., and RALPH GRIFFIN, Esq., F.S.A., read a paper on a set of heraldic counters in the British Museum, which will be printed in *Archaeologia*.

Mr. GRIFFIN emphasized the beauty and utility of the armorial manuscript from the Franks Collection: it consisted of cuttings from some printed book, which some one had embellished with arms, badges, and supporters. The notes on the Hadley panel, dated 1829, showed its condition nearly a century ago. During the long reign of Elizabeth very few peers were

¹ *Proceedings*, xxii, 125.

created, the Tudors having other means of raising funds; and the fact that one of the peers lost his head at a known date served to fix the date of the counters. The griffin passant, assigned as a crest to Wentworth, might possibly have been derived from St. Leger of Ulcombe in Kent, and was familiar to china collectors on Rockingham ware, the marquess of Rockingham representing the Wentworth of Elizabeth's reign.

Mr. DALE was especially interested in the crest of Wriothesley, Earl of Southampton, which appeared on his tomb in Titchfield church. As an example of verbal corruption, he cited Bugle Hall, the name being derived from the heraldic *buculus*.

Capt. LYON THOMSON asked if the counters were intended for use at all. Some kind of game had been suggested, but he thought they might have been used, for instance, by Garter king-of-arms to arrange processions of peers in order of precedence.

The PRESIDENT concluded they were used in card games, and in thanking the collaborators for the paper, emphasized the value of the Franks heraldic bequest, which had supplied so much material.

Thanks were ordered to be returned for these communications.

THURSDAY, 20th FEBRUARY 1919.

WILLOUGHBY ASTON LITTLEDALE, Esq., M.A.,
in the Chair.

Notice was given of the ballot for the election of Fellows on Thursday, 6th March 1919, and the list of candidates to be put to the ballot was read.

The Rev. D. H. S. CRANAGE, Litt.D., F.S.A., gave an account of Shawbury church, Shropshire, and an early holy-water stock recently found there. The stock was exhibited by permission of the Rev. Frederick Vernon, M.A., Vicar of Shawbury. The following is a summary of the paper:

The church of Shawbury, a few miles north-east of Shrewsbury, is mentioned in Domesday Book, and is probably of Saxon foundation. No part of this early church exists, but the present plan shows work of at least seven periods. In late Norman times a complete rebuilding took place with at least chancel, nave, and aisles. Some half-century later a new large chancel was erected. The fourteenth century is represented only by the east window of the south aisle. The main east window is a hundred years later. At the end of the fifteenth century, or perhaps early in the sixteenth, the north aisle was rebuilt and extended eastward, a low four-centred arch connecting it with the chancel. The west wall was rebuilt and the tower erected in such a position that half of the west bay of the late Norman arcades was destroyed. The north porch dates from the second half of the eighteenth century, and so did the destroyed south porch. In modern times the east end has been rebuilt and various 'restorations' carried out.

The font may well date from the eleventh century: it is carved with fillets, cable, and two varieties of chain ornament. Near the north door is a solid oak poor-box on an octagonal half-column: it is the only medieval example in the county. The roofs of chancel and nave probably date from 1603, when square-headed windows were inserted above the chancel arch. The pulpit is dated 1612. In 1638 money was paid 'for ridding the roode loft, for helping up the beame to the roode loft'—an unusually late reference to such a loft.

The Civil War is referred to in the churchwardens' accounts. In 1647-8, £1 was paid, 'Repayring the Clocke beeing spoiled by y^e garison & makeinge it to goe agayne'. An amusing instance of phonetic spelling is found in an entry of 1678, recording the purchase of 'Sallit Hyle'. At a church a few miles away, where there was a fire-engine house, we read in the accounts of 'Ile for the Indian'.

The finding of the carved stone exhibited is described by Mr. Vernon under date 17th February 1919, as follows: 'In 1896, the ninth year of my incumbency, we took a considerable portion of entirely new ground into our churchyard, on the south side of the church. In this new ground, of which the soil is very sandy, the sexton was digging a grave last summer . . . and when he had dug out the soil to about the depth of six feet, he came upon the piece of carved stone lying entirely by itself embedded in the sand. There was no other stone of any kind near it. The spot where it was found is some yards outside the previous boundary wall of the churchyard.'

There can be no doubt that the stone was a holy-water stock or stoup of the pillar type (see figs. 1 and 2). It is evidently



Fig. 1. HOLY-WATER STOCK, SHAWBURY CHURCH.



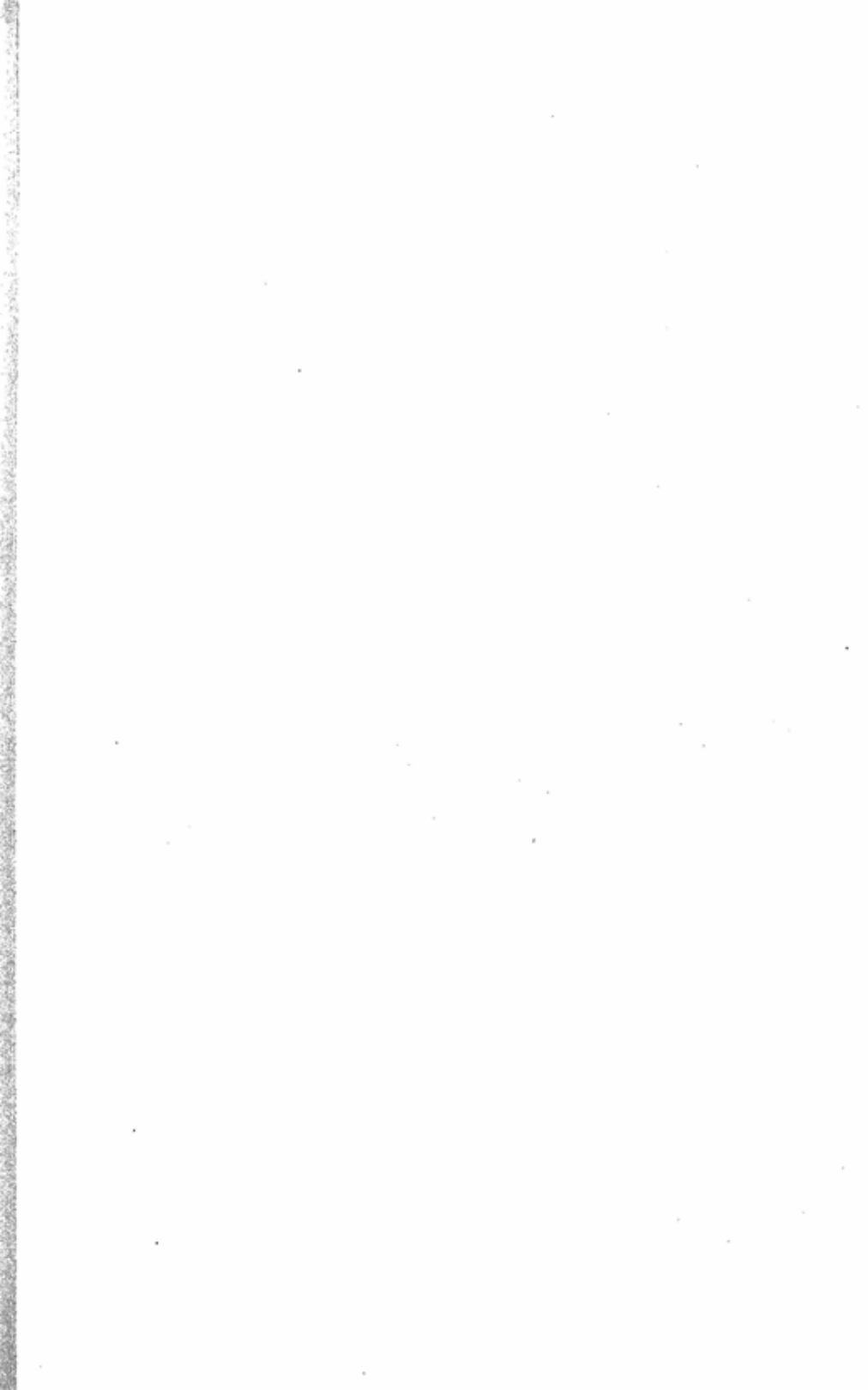
Fig. 2. HOLY-WATER STOCK, SHAWBURY CHURCH.

not the angle-shaft of a doorway, as the capital is carved all round. The basin, too, has every appearance of being original, and of not being cut out of an earlier feature. The material is evidently sandstone from the neighbouring Grinshill quarries. There is no sign of a lead lining to counteract the porous nature of such a material. The date is late Norman, probably towards the end of Henry II's reign, and it is the earliest example in the county. The capital is cut up into rudimentary foliage, as is common at the period, and nail-heads are added. The details fit in well with those of the south and north doorways, the latter removed to its present position when the aisle was rebuilt. We do not know which doorway it stood near. The village is on the north side, so that the north doorway may always have been, as now, the main one.

Niche stoups frequently remain, but the pillar stock was naturally often removed when its use had passed away. From their comparative rarity, therefore, it must not be assumed that the pillar type was much less common than the other. Stoups are clearly a survival of the laver in the atrium of a basilican church, which in turn was derived from the similar feature in the ritual of the Jewish Temple and Tabernacle. The whole subject, for its full treatment, awaits the attention of the architectural antiquary.

Mr. PHILIP JOHNSTON elicited the information that there was no drain to the stoup, though there was a general resemblance to a piscina. The subject had been passed over in architectural handbooks and county histories, though many examples must have existed at one time. Their use could be traced back to Jewish ritual, and the rarity of early specimens was at first sight extraordinary. There was a fair proportion of pillar or niche piscinas in existence, and there were possibly more stoups than had been identified. He had noted a few of the twelfth or thirteenth century, and the present example was remarkable for its pillar form, the first of the kind he had come across.

The SECRETARY agreed as to the nature of the exhibit, and noticed a parallelism in the development of the stoup and piscina. The earliest known were of the pillar form and dated from the twelfth century, and he cited another early case in Essex. Both stoup and piscina were at first pillars against a wall, and afterwards took the form of niches. In the present case the carving continued all round, and was evidently intended to be seen. The position of the tower was explained by the fact that the boundary of the churchyard came too near the west end





ST. BARTHOLOMEW THE GREAT, SMITHFIELD : ARM OF PRIOR'S CHAIR

of the church to allow room for a procession path, if the tower were to be built at the west end of the nave. It had therefore been pushed eastward, taking up half of the west bay of the nave.

Dr. CRANAGE replied that he had not noticed the relation of the tower to the boundary, but would investigate the point. He agreed that stoups of that date were rare, and regretted that Dr. Cox had not distinguished the types in his list.

E. A. WEBB, Esq., F.S.A., exhibited an arm of the Prior's chair from the chapter-house of the Augustinian monastery of St. Bartholomew, West Smithfield, on which he read the following note:

During the excavations made for building a large warehouse on the site of the chapter-house and Prior's house of St. Bartholomew's, in 1912, there was found a stone, as I mentioned in a paper read before the Society in February 1913,¹ upon which is carved the figure of a kneeling Austin canon, clad in the habit of the order. This stone, by the permission of the rector and churchwardens, I am exhibiting this evening.

At the time I was unable to say to what the fragment had belonged, or what was its purpose, but in September 1916 I had the good fortune to be in the church when Mr. W. R. Lethaby was paying it a visit. I drew his attention to the stone and, after careful inspection, he came to the conclusion that it was an arm of a stone chair.

On the reverse side of the carved figure, and on what I venture to think is the inner side of the chair arm, is a plain face with a chamfer edge; on the sloping portions are broken knobs, which I thought might have been 'joggles' connecting this stone with another one, but Mr. Lethaby considers they are the remains of small ornaments. The broken portions above and below them he thinks to be the remains of mouldings on the arm of the chair. Below the figure is a projection of the same stone, with a moulding on the lower front edge, of the style of the thirteenth century.

Mr. Lethaby came to the conclusion that this stone was probably the arm of the prior's chair, and with this conclusion I agree. The view is supported by the fact that the stone was discovered immediately to the east of the chapter-house, and inasmuch as the prior's seat was always at the east end of that building, it would have been the natural place to have thrown it when the chapter-house was being cleared for secular occupation, as it was after the Suppression.

¹ *Archaeologia*, lxiv, 176.

During the excavations in 1912, remains were found in the south wall of the usual stone bench, which served for seats for the canons attending the chapter. I assume, therefore, that the moulded stone below the figure formed a portion of the bench. For this and other reasons I am of opinion that the figure was on the outside and not on the inside of the chair, as I believe Mr. Lethaby thought when he first examined the stone.

As regards the date indicated by the moulding below the figure, we learn that embellishments were added to the chapter-house in the thirteenth century from fragments of a thirteenth-century arcade, similar to that at Westminster, found during the excavations.¹ I therefore think that it is a fair assumption that this chair dates from about 1240, when the nave of the church was nearing completion.

Mr. PHILIP JOHNSTON said that a stone chair not mentioned in the paper had been recently discovered in the crypt of St. Augustine's monastery, Canterbury: it had been excellently reproduced in the 'Transactions of the Kent Archaeological Society' (*Archaeologia Cantiana*, vol. xxvi, p. 7), and had a profile not unlike the fragment exhibited, except for the kneeling figure of a canon, which seemed to be unique. The closed or choral cope of the sculpture was the choir outer habit of the canons, and the slide showed the hands projecting from a slit in front. A late instance of the choral cope was the effigy of Archbishop Grindal of Canterbury, which was (or had been) in Croydon old parish church. He inquired whether the material was marble or oolite, and thought it resembled the black marble of Belgium. The exhibit had drawn attention to an interesting class of chairs, a number of which still existed in churches.

The SECRETARY said the stone was undoubtedly Purbeck marble. The most interesting feature of the slab, which must be accepted as the arm of a chair, was the row of projections along the front edge, which could not be considered ornamental. The studs were clearly left for the attachment of some undercut ornament, worked out of the solid. It seemed to have taken the form of a shaft, expanding into leaf-work or something else at the top of the arm of the chair. Undercut shafts of this nature might be seen on some of the more elaborate thirteenth-century gravestones in our greater churches, attached by crockets or simple projections to the rest of the marble slab in which they were cut. The head of the kneeling figure was incomplete, and must have been finished in the upper part of the slab which had

¹ *Archaeologia*, lxiv, 175.

been worked into the undercut carving. The top rim was complete at the back. He was not convinced that the figure was wearing a choir cope: in a kneeling position and in a profile view a figure dressed in a habit might have that appearance. Underneath was evidently a vestment with loose sleeves, and the rochet usually had tight sleeves. He agreed that the sculpture dated from the last few years of the twelfth century, and Professor Lethaby had reminded him that a number of carved stones had been found at St. Bartholomew's of about the same date, possibly belonging to the chapter-house doorway; and in the Professor's opinion the date was about 1180, the same as Rochester and the Temple church. A grave-slab from Hales Owen in Worcestershire¹ bore the figure of a white canon apparently wearing an alb and amice, and kneeling, not in the air, but most uncomfortably on a flight of steps.

Mr. WEBB regarded the stone as Purbeck marble, though there was much Reigate stone used in the church, for example in the effigy of Rahere the founder.

Thanks were ordered to be returned for these communications and exhibitions.

THURSDAY, 27th FEBRUARY 1919.

Sir ARTHUR JOHN EVANS, Knt., D.Litt., F.R.S.,
President, in the Chair.

Notice was again given of a ballot for the election of Fellows to be held on March 6th, and the list of candidates to be put to the ballot was again read.

WILLIAM PAGE, Esq., Vice-President, read a paper on 'Notes on some early riverside settlements of London', in which he quoted evidence to show that the increased overseas trade brought to London under Danish commercial enterprise in the ninth century demanded additional accommodation for shipping, to provide for which hithes, docks, or gates, as they were indifferently termed, were built. He dealt with those on the

¹ *Transactions Birmingham and Midland Institute*, vol. 2, pl. 5, fig. 6.

north bank of the Thames westward of Dowgate. The earliest of these was Queenhithe, or Æthelred's Hithe, which was apparently built at the end of the ninth century by Æthelred, husband of the famous Æthelfleda, daughter of King Alfred and later known as Lady of the Mercians. From entries in the chartularies of Chertsey and Missenden, Brokenwharf could perhaps be traced to a settlement of Danes here at a little later date. At the estuary of the Walbrook there were the settlements of the wine merchants of Rouen which developed apparently into the Vintry, and of the merchants of Cologne which became the Steelyard. Both these last seem to have been in existence in the time of King Æthelred, and the former had its dock on the west side of Walbrook and a wharf on the Thames, and the latter its wharves on the east of the Walbrook and on the Thames also.

Mr. C. L. KINGSFORD said the paper was welcome as throwing light on the obscure history of an important section of London. He remarked on the numerous 'gates' in that area, which did not refer to openings in the City wall, the number of such gateways being limited and well known. A water-gate might be the place where goods were brought in; but as had been pointed out the district derived its importance from the Danish colonies there, and if 'gate' were to be taken as equivalent to 'lane', the word must be of northern origin. According to Mr. W. H. Stevenson, the word could only bear the meaning of lane or road if a northern connexion were proved.

Mr. REGINALD SMITH drew attention to the long stretch of Roman wall marked on the map along Upper Thames Street, and believed that no trace of a gateway had been noticed in the foundations; hence in Roman times there was no access to the river in the district under discussion. Roman roads radiating from the port of London must therefore be sought elsewhere, and his opinion was that the centre of gravity was then east of the Walbrook, and the roads and river-crossing converged on the site of the old Custom House. The Roman building at the Coal Exchange fitted into the scheme, and Saxon churches seemed to mark out the road to Newgate. Mr. Page had had access to unpublished material dealing with a subject of the deepest interest to the Society, and it was to be hoped that further contributions to the history of the capital would be made in the near future.

Mr. DUNCAN thought that Weremannacre was in the parish of St. Dunstan-in-the-East, as the grant of Lewisham and other lands made or confirmed by Edward the Confessor, to show his

gratitude to the abbey of St. Peter at Ghent, was supplemented by a landing-place so called on the Thames bank.

The PRESIDENT said the Society always listened to Mr. Page with the greatest interest, and was specially concerned with the early history of London. He was much impressed by the great momentum given to trade in the ninth century and the following Viking period, and remarked that 'gate' in the sense of street was Scandinavian. The Danes were generally regarded as a destructive influence, but there was a significant growth of trade in London during the period of their activity. In the *Traveller's Song* were references to trade with the Baltic, Lithuania, Poland, and Constantinople; and another record of northern trade was compiled and published by King Alfred. The first account of northern travel dealt with Norway and the Lapland coast across to Perm and Central Asia. It was important to get fresh evidence on the subject, and the Society was indebted to the author for his efforts in that direction.

Mr. PAGE replied that he hoped to continue his researches with regard to settlements on the river bank, and but for a shortage of papers would have postponed the reading of his paper till it was more complete. He agreed that the important part of the river in Roman times was east of London Bridge; but in Norman times Billingsgate was certainly overshadowed by Queenhithe, as Stow expressly stated, though to pass the bridge the mast would have to be unstepped. He found that the word 'gate' in the sense of street was common near the entrance to a town, as at St. Albans (Boroughgate) and also at York.

Mr. BAILDON referred to the repeated occurrence of 'gate' in the settlements of Northmen. At York Micklegate was a main street, not a lane, and strangers often confused it with the gateway known as Micklegate Bar. Nearly all the main streets of York were 'gates', and as a Scandinavian word it was to be expected in a colony of Northmen.

Mr. LITLEDALE said the terms sheep-gate, beast-gate, etc., were common on farms in the north; there was nothing structural about a 'gate', which merely indicated the way in a certain direction.

C. R. PEERS, Esq., Secretary, read the following note on a Gnostic talisman from Carnarvon:

In the course of last year's session there was exhibited by Mr. W. J. Hemp, among other antiquities from North Wales, a thin sheet of gold bearing an inscription in Greek letters,

which was found in 1827 a little to the south of the Roman fort of Segontium near Carnarvon, in digging the foundations of the house know as Cefn Hendre, and is now kept in the Carnarvon Public Library.

Several notices of this object have appeared in print, and a drawing of it made by Mr. Worthington Smith has been more than once reproduced, but nothing that can be called a reading of the inscription has to my knowledge been placed on record. It is indeed noted in Hübner's *Inscriptiones Britannicae Christianae*, but the version there given, consisting of three words, need only be quoted as an example of the danger of trusting to distant correspondents.

The inscription actually is of twenty-four lines, nineteen and a half of which are in Greek letters, and the remaining four and a half are composed of symbols.

The opportunity to make a transcript seemed a good one, and Mr. Hemp and I, with the help of a magnifying-glass and an enlarged photograph, obtained the reading which is here shown.

Of the nature of the gold plate there can, of course, be no doubt. It is a talisman or amulet, to be worn as a protection against evil of some kind or other, and the name of its original wearer, Alphianus, occurs in the last lines of the inscription. The preparation of such an amulet is described in a fourth or fifth century Greek magical papyrus in the British Museum, no. cxxiv, ll. 26-8.¹



GOLD GNOSTIC TALISMAN FROM
CARNARVON (†).

λαβε λαμναν χρυσαν η αργυραν χαραξον επ αυτης
τους χαρακτηρας και τα ονοματα και τελεσας φορει καθαριως.

The inscription, as is clear from its opening words, belongs to a class of magical formulae which are Gnostic in character.

The curious form of mystic belief known as Gnosticism seems

¹ *Catalogue of Greek Papyri in the British Museum*, 1893, p. 122.

to have taken definite shape in the first and second centuries of our era, and owed much of its character to earlier Asiatic doctrines, particularly that of emanations from the Supreme Being which seems to be first elaborated in the *Zendavesta*.

Its syncretic form made assimilation with the Christian teaching easy, and the warnings against magic and curious arts, myths and genealogies, which abound in the *Epistles* and the early patristic writings, demonstrate how widespread were the attempts to reconcile the older beliefs with the new.

The two chief schools of Gnosticism were established in Syria by Menander, a pupil of Simon Magus, and in Alexandria by Basilides, who was a contemporary of the Emperors Trajan and Hadrian. To him is attributed the devising of the figure of Abraxas or Abrasax, which has been explained as a representation of the Supreme Being, with the symbols of the five emanations Nous, Logos, Phronesis, Sophia, and Dynamis. The word Abraxas is said to signify the Holy Name, and is to be considered as a title of the Supreme God Iao, the Jewish Jahveh or Jehovah.

On the engraved gems with figures of Abraxas are inscribed such words as Adonai (the Lord), Sabaoth (glory to Thee), Semes Eilam (Eternal Sun), Ablathanabla (Thou art our Father), a word familiar in medieval magic as Abracadabra.

It would be impossible, even if it were within my power, to give anything like a detailed presentment of Gnostic tenets in a mere note such as this, and I have confined myself to a few disconnected points which bear on the inscription of which I exhibit a transcript.

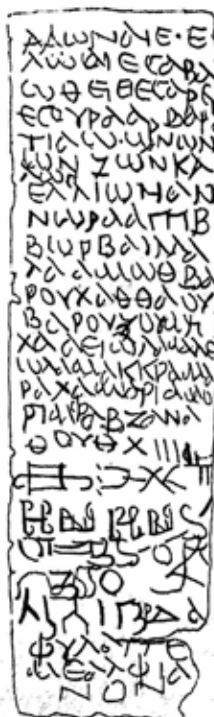
The absorption of the soul after death into the Godhead, and its passage thither through the realms of the seven planets, was a characteristic Gnostic belief. These realms were under the power of genii, from each of whom permission to pass through their dominion had to be obtained, by the presentation of a symbol, which has been equated with the Pentacle or Solomon's Seal.

The four titles of the God of the Jews, Iao, Sabaoth, Adonai, Eloï, were adopted by the sect of the Ophites as names of four of the seven planetary genii: Adonai of the Sun, Iao of the Moon, Eloï of Jupiter, Sabaoth of Mars, and to these were added Orai for Venus, Astaphai for Mercury, and Ildabaoth for Saturn. Four at least of these names occur in our inscription.

Nothing could be further from my purpose than to attempt to give a connected account of the complicated system of magical formulæ which confronts the inquirer into the trackless wilderness of Gnostic inscriptions. Intentionally obscure, and meant only for the eyes of the initiated, they degenerate into a maze

of letters and symbols whose magical qualities were no doubt unimpaired, perhaps rather enhanced, by their unintelligibility.

The inscription here shown is no exception to the rule, and I have been told by those who are qualified to speak on the subject, that in the present state of our knowledge it would be utter waste of time to attempt to make any connected sense of



αδωναιε·ε
 λωαιεσαβα
 ωθειθεσαρει
 εσουρααρβαρ
 τιαω·ωνων
 ωνζωνκα
 λως·
 ελλίωναν
 νωρααγπβ
 βωρβαιμα
 λααμωθβα
 ρουχαθθαου
 βαρουζουαφι
 χασειωλαμε
 ωλαμκκραμα
 ραχαμαριαμο
 ρπμφαβζανα
 θουθ XIII

symbols.

φυλάττε
 μεαλφια
 νον

it. My excuse for taking up your time at all must be that it may be worth while to reproduce the facsimile of the talisman, for the use of the better equipped scholars of the future. That is all that Mr. Hemp and I set out to do.

The only parts of the inscription which are sufficiently intelligible to be commented upon are the beginning and the end.

First come the names Adonai, Eloi, Sabaoth, and in the fourth and fifth lines *αρβαρτιαω*—the Fourfold Iao—followed

by *ων ων ων ζων καλως*, 'thou who art, who art, who art, who livest beautifully'. In lines thirteen and fourteen occur *ειωλαμ* (perhaps *σεμες ειλαμ*—'eternal sun') and *κραμα* ('moon'). In the second line of symbols—the *χαρακτηρες* of the British Museum papyrus—a pair of monograms seems to be repeated, and the last three lines of the inscription *φύλαττε με ἀλφίανον*—'protect me Alphianus'—give us the name of the first owner of the talisman and the reason for which he wore it, as we must suppose, some sixteen hundred years ago, among the barbarians of the uttermost parts of Wales.

The PRESIDENT congratulated the authors on having interpreted so much of an inscription that had been given up as hopeless. There was a great deal of interesting matter in King's *Gnostic Inscriptions*, but it was evident that much remained to be done in that field of research. The discovery of such a document in Britain was remarkable, as very few Greek inscriptions had been found in the country. The copy produced was in his opinion quite accurate, and what little sense there was in the inscription had evidently been extracted.

Thanks were ordered to be returned for these communications.

THURSDAY, 6th MARCH 1919.

Lt.-Colonel GEORGE BABINGTON CROFT LYONS,
Vice-President, in the Chair.

A special vote of thanks was returned to G. Eumorfopoulos, Esq., F.S.A., for his gift of *Ἐκφρασις τῆς Ἀγίας Σοφίας*; by E. M. Antoniadès: 3 vols. Paris, 1907.

This being an evening appointed for the election of Fellows, no papers were read.

The ballot opened at 8.45 p.m. and closed at 9.30 p.m., when the following were declared elected Fellows of the Society:

Howard Coppuck Levis, Esq., LL.B.

Francis Weston, Esq.

Harold Hulme Brindley, Esq., M.A.

Vere Langford Oliver, Esq.

Louis Colville Gray Clarke, Esq.

Paul Waterhouse, Esq.

THURSDAY, 13th MARCH 1919.

Sir ARTHUR JOHN EVANS, Knt., D.Litt., F.R.S.,
President, in the Chair.

The following were admitted Fellows :

Howard Coppuck Levis, Esq., LL.B.
Francis Weston, Esq.

HORACE SANDARS, Esq., F.S.A., read a paper on the Gold Fields of Transylvania in the time of the Romans.

Mr. ARTHUR SMITH inquired how the power was applied to the wheel of the winding-gear. At Rio Tinto there was no evidence that it was applied to the wheel itself, but rather to another wheel attached to this axle. There was no mention in the paper of the gold bars, rather larger than a stick of sealing-wax, which were found in Haromszek, and dated from the late fourth century.¹ If the Roman workings had then been cleared away, it was surprising that the gold got into Transylvania. Some bore the mint-mark of Sirmium, which was 300 miles from the place of discovery.

The PRESIDENT agreed that the bars which were stamped at the modern Mitrovitzza in Serbia dated from the reign of Valentinian, about 370 A.D., when the Empire had lost its hold on Transylvania. Possibly they were obtained by barter, from the Dalmatian mines, for among the colonists of Dalmatia was a large element of Dacians, who were a mining race. Even before the Roman conquest there had evidently been a great trade between Transylvania, the Adriatic, and the Aegean. Coins were scattered along the track of communication between the Adriatic and Transylvania. Like the Emperor Trajan, Mr. Sandars had dealt with Spain and then turned his attention to Dacia. It was clear to any one travelling as he had in the country, that the Romans had left their mark on Transylvania. It was interesting to inquire how far the old Roman population of Dacia had survived. It had been colonized largely from Commagene and parts of Asia Minor, becoming a centre for Syrian religions, especially the Mithraic cult. Transylvania was a tempting prize and closely occupied by the Romans or

¹ *Proceedings*, xx, 93 (G. F. Hill), and *Numismatic Chronicle*, xv (1915), 489 (Sir Arthur Evans).

a Romanized population: to-day the bulk of the inhabitants spoke a Romance language. The Rumans maintained that they had been there ever since Roman times, but when Aurelian withdrew, the Romans lost their hold over the country, which was overrun by the barbarians; and it was only by re-immigration from south of the Danube that Roman shepherds slowly established themselves.

Mr. SANDARS replied that the mechanism of the wheels was a problem that would perhaps never be solved. In Transylvania they could not have been mounted as suggested, as there was no room for an axle, and any smaller wheel attached to these found would have had to be very strong. No doubt the wheel was turned by pulling on the spokes, as shown by a find in the mine that produced the tablets. Vitruvius had been ruined by those who had illustrated his works. In a Spanish mine the speaker was connected with, a set of Roman pumps had been found on the Archimedean screw principle, probably worked like a treadmill. The gold bars did not come into the period, and were found in another part of the country: he thought they were originally stolen property, hidden when being carried off.

Thanks were ordered to be returned for this communication.

THURSDAY, 20th MARCH 1919.

Sir WILLIAM MARTIN CONWAY, Knt., M.A., M.P.,
Vice-President, in the Chair.

REGINALD A. SMITH, Esq., F.S.A., read the following paper on a Jersey megalithic monument at Henley-on-Thames:

Even if carefully written and adequately illustrated, a paper read to this Society 132 years ago is almost certain to stand in need of revision in the light of subsequent discoveries; and the opportunity of checking so ancient a record by reference to the monument itself is one that should not be missed. The paper in question does not come well out of the ordeal, but may serve as a basis of inquiry into the date and nature of the monument; and though the whole problem is still unsolved, another step

forward may be taken with the help of parallels at home and abroad that have been carefully studied in recent years.

The plan given in *Archaeologia*, viii, pl. xxix, and reproduced as fig. 1, is useful and probably accurate; but the views¹ on pl. xxviii are contradictory and inadequate, and the text (p. 384) not only contains many obvious errors, but omits essential details. It was contributed by Mr. Molesworth, and read 11th January 1787, the monument being described as 'a Druid

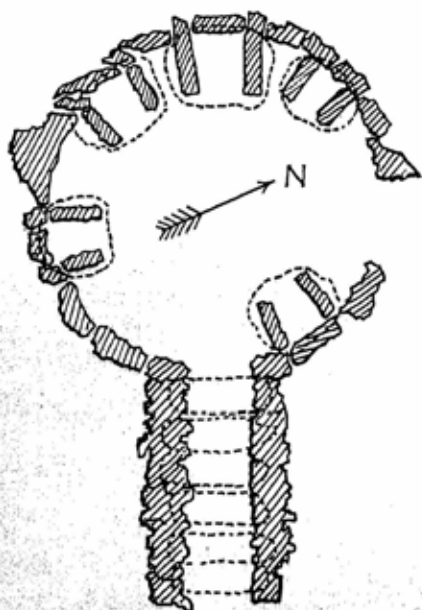


Fig. 1. PLAN OF MEGALITHIC MONUMENT
REMOVED FROM JERSEY TO HENLEY.

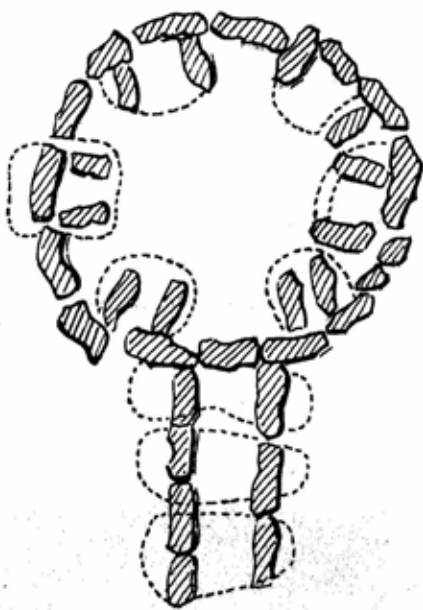


Fig. 2. PLAN OF MEGALITHIC
MONUMENT, JERSEY.

temple, lately discovered on the top of a hill near St. Hillary' (St. Helier's, Jersey). The circumference of the stone circle is given as 66 ft. (or a diameter of 21 ft.), and there are said to be forty-five large stones, 7 ft. high, 6 ft. wide, and 4 ft. thick, but only thirty-two are marked on the plan with one extra lying a little beyond the entrance to the passage. Four perfect lodges or cells within the circle and another destroyed are mentioned in this account, but there are five shown on the plan, and there was probably another in the northern gap, which is given as 6 ft. 9 in.

¹ These really belong to Marshal Conway's letter, printed after Mr. Molesworth's account in *Archaeologia*, but adding no information of any importance.

wide. The supposed entrance, a subterranean passage 15 ft. long, 5 ft. 3 in. wide, and 4 ft. 4 in. high inside, is said to be to the east, but really lies east-by-south¹; and the measurements of the cells are incomplete and in part unintelligible. The 'greatest lodge', opposite the passage, is said to be 4 ft. 3 in. both in length and depth, and its neighbour on the south about the same, its height being 3 ft. 7 in.

'The eastern cavity was still filled up with the same rubbish that covered the temple.' If this statement can be trusted, it is important as bearing on the roofing question to be discussed presently. The 'east cavity' is presumably the entrance passage, and its first capstone is given as 3 ft. thick.

By analogy, the gap on the north side should be accidental, and it is probable that within an unbroken ring of standing stones there was another cell at this point, making six in all. That is the number given on another plan of a Jersey monument (of which no description has been found), and though there is room for a seventh² within the ring on the south side of the passage, the stones composing it are less likely to have been removed than those at the north point, where the large standing stones are no longer in place. The two plans are here placed side by side and reduced to the same size for comparison or contrast, but the scale and orientation of the second are unknown. We have, then, two examples in Jersey of a very rare megalithic type or, alternatively, a very incorrect plan confronted with a correct one of a single monument. Perhaps the publication of both will bring to light evidence that will decide the point.

The following is a borrowed account of this monument added by Rev. E. Durell to Rev. Philip Falle's *Account of the Island of Jersey* (1837), p. 431, referring to p. 176:

As this extraordinary piece of antiquity was subsequently better discovered and investigated in 1785, and then afterwards most injudiciously as well as most unfortunately allowed to be removed out of the island, our readers will not be sorry to have Mr. Plees' own account of that transaction. 'On levelling the surface of this hill in 1785 for the purpose of forming a parade, there was discovered under an artificial mount, a *Poquelaye* or Druidical temple, composed of unhewn stones and of a different construction from any hitherto met with in this island; though there may be more of these ancient monuments concealed under similar eminences. . . . This monument comprised a collection of stones arranged in a circular manner, the exterior periphery of which was 72 ft.³ This circle was formed by six small cromlechs,⁴ altars, or cells

¹ As re-erected at Henley the passage points north of east, and the interior diameter of the circle is 27 ft.

² Fergusson says there were originally seven cells (see below).

³ This gives a diameter of 23 ft. The present inside measurement is 27 ft.

⁴ This word is now generally used for stone-circles: dolmens are here meant.

from three to nearly five feet in height, and the same in length, separated from each other by upright stones, mostly in a kind of triangular form, and varying in height from four to seven feet, with the exception of one, the height of which was only eighteen inches: this was opposite to the north, and is supposed to have been designed for a more common entrance than that in the eastern front.

The principal opening fronted the east, and was through a covered passage, 8 ft. long and 3 ft. wide. On the left of this was a smaller stone, about 14 in. high. In some of the cells ashes were found, and in one of them, which was nearly opposite to the entrance, were evident traces of smoke. This cell differed also from the others; instead of being covered with a flat stone, the superior surface of its upper one was extremely irregular, and apparently little calculated to hold a victim.

If we conceive the whole structure to have been destined for adoration and sacrifice, it is probable that this cavity contained the sacred fire from which the altars were supplied. The *Poquelaye* was encircled with a dwarf wall, 3 ft. in height, having four lateral steps on the outside, and three within. The external circumference of this wall was about 128 ft.¹ . . . The area of this circle was completely void of any erection whatever. The cells appear on too contracted a scale to have served either as sacrificial altars (particularly for human victims) or as places of sepulture. If designed as sacred repositories for human ashes collected from funeral piles, urns or other vessels would probably have been found in some of them; and moreover had the cells been intended for Kistvaens, the entrance of each recess would have been closed, whereas every one was open in front. In fine, they were precisely like cromlechs [more properly dolmens] on a diminished scale.

The States in a moment of enthusiasm [November 7, 1787] unanimously voted this monument to Marshal Conway, the governor of Jersey, who caused it to be removed to Park Place, near Henley in Berkshire, and there had it erected exactly (as it is said) according to its original form, and conformably to its real dimensions, though several stones were broken in displacing them.

This was an unfortunate event to the island, as so precious a relic of remote antiquity would doubtless have drawn thither a number of learned admirers; nor did the Marshal himself escape severe censure for having accepted so valuable a token of esteem, which, however retaining its pristine appearance, lost that consequence which it derived from original position. The loss is indeed now of less importance, as the fortress erecting on the hill would, in all probability, have occasioned its removal.

This account by W. Pless (*History of Jersey*, 1817 edition, pp. 114-17) is one to be thankful for, though deficient in some important particulars. His last paragraph will probably call forth less sympathy than satisfaction that the monument was preserved at all as it would have been destroyed, if not on the first, almost certainly on the second occasion when the site was utilized for military purposes, for Lieut. Oliver stated in 1870² that the monument formerly stood on the site of Fort Regent, and it is

¹ If a circle may be assumed, the diameter would be 40½ ft.

² *Journ. Ethnol. Soc.*, ii, 65, in a paper on megaliths of the Channel Islands. Guernsey monuments are described in *Archæologia*, xvii.

unlikely that an antiquity of that kind would have survived in the circumstances. In 1806 General Don laid the foundation-stone of the fort on the old Mont de la Ville, east of the harbour.

The Editor's footnotes remind us that the measurements given by Plee are the heights above ground level; and the description of the dwarf wall 3 ft. high and 128 ft. in circumference was derived from a model of the monument, made on the scale of half an inch to a foot before the demolition of the stones.

Some interesting details are added by James Fergusson, who reproduces the plan from *Archaeologia* in *Rude Stone Monuments*, p. 51 :

The circular chamber was 24 ft. in diameter, and contained originally seven little cells, each roofed by a single slab of stone. This circular area was approached by an avenue, 17 ft. long at the time of its destruction, which was roofed throughout the whole length with slabs of stone. The central chamber never, however, appears to have been vaulted, so that access to the tombs through this passage could never have been possible after the mound was finished. The chamber was found filled with earth, and the whole monument covered up by a tumulus of considerable extent. It need hardly be observed that it is more unlikely that any people should cover up such a monument at any subsequent age, than that they should dig such monuments and leave them standing without their envelopes, as is so generally assumed.

In the second edition of Falle's *Caesarea, or an account of Jersey* (1734) there is the first mention of this monument, as verified by Mr. E. T. Nicolle. 'In the same parish upon St. Helier's Hill is another of these altars, supported as before, the incumbent stone 14 ft. long, 7½ ft. broad, and 3 ft. thick. Near it was a circle of other stones, whereof only one remains, the rest having been broken to make a wall hard by.'

The inference is that the monument was partly uncovered at least fifty years before it was cleared away; and I take the 'altar' mentioned above to be the passage of the monument, the rest of which was still covered by the mound. Possibly this partial uncovering took place in Roman times, as a 'medal' of Claudius and another illegible piece were found in 1785. The dimensions agree fairly well, but Fergusson¹ states that the passage was 17 ft. long. The diameter of 24 ft. mentioned in his book was no doubt an outside measurement, the *Archaeologia* plan giving an inside diameter of 21 ft.

The 1797 edition of Falle's work includes two engravings of the 'Druids' Temple found in the Island of Jersey', and the plates are reproduced in Grose's *Antiquities of England and Wales*, at the end of vol. iv. The paragraph quoted above is repeated on p. 144, but there is nothing to show that it refers to

¹ *Rude Stone Monuments*, p. 51.

the subject of the plates, which were published ten years before by S. Hooper.

The engravings are therefore dated two years after the discovery and removal of the monument, and were no doubt based on sketches made on the spot during the operations. Basire's engravings in *Archaeologia* evidently reproduce sketches by another hand, made a short time before, as the barrow is only partly removed, but the engravings are barely recognizable as representations of the same monument. Another engraving of the monument as re-erected at Henley is given in Britton and Brayley's *Beauties of England and Wales*, vol. i, p. 189, and the complimentary inscription (since lost) is quoted in the text.

It is open to question whether the Marshal was more anxious to acquire it than the citizens of Jersey to be rid of it, for at that time relics of antiquity were ruthlessly sacrificed (not only in Jersey) for temporary profit or convenience, and I have not yet been able to locate or find any detailed report of an alleged Jersey monument that would be a very close parallel if it ever existed.

In his paper in the Report of the International Prehistoric Congress at Norwich in 1868, Rev. W. C. Lukis reproduces the plan of a Jersey monument (fig. 2) practically identical with that now at Henley (his pl. i, fig. 10), and another (his fig. 11) from the Morbihan without the inner cells, of which he says (p. 221): 'I must admit that I have not found structures like no. 11 in a complete state, i.e. with the vault and its enveloping mound. I have found them buried up to the top of the supports, with a slope of ground to a well-defined base indicating the tumulus, and observed vestiges of the original vaulting, which leave no doubt in my own mind as to its mode of construction. In the case of no. 12 (presumably also in the Morbihan) the beehive vaulting of two of the side-cists remains intact.' He was, however, only acquainted with two like no. 12 in Great Britain: one formerly in the island of Jersey 'removed to ornament a park at Caversham near Reading' (a mistake for Henley), the other in the Isle of Man.

We must conclude from the above that Lukis was not acquainted with the plan in *Archaeologia*, and that (as Dr. Marett suggests) his own plan was very inaccurately drawn from the model made at the instigation of Horace Walpole: besides that in the possession of this Society, two copies are preserved in the island, one in the Public Library, the other in the museum of the Société Jersiaise.

It will be observed that Lukis and Fergusson differed as to the vaulting of this monument; and Professor Montelius, who borrowed the plan from Lukis's paper, evidently adopted his

view on this point, for accompanying the plan in *Antiquarisk Tidskrift för Sverige*, xiii, 95, is the statement that it was a burial chamber with passage, having step-vaulting (corbelling or a beehive dome) over the centre, and slabs on the cells and passage.

Corbelling for such a wide span, if it were feasible at all, would require a thick and level wall as a foundation, whereas the remains of the monument as well as the sketches of 1785 show stones of irregular formation, with little or no trace of dry-walling to fill the interstices. If the series of horizontal projecting slabs were crowned with a large capstone, as was often the case, the latter should have been found *in situ*, fallen into the middle of the ring, unless indeed the Romans or others shifted the capstone on to the mound before descending inside the monument. The infilling is briefly described as rubbish, which might include the smaller roofing slabs, but these would not fall into the passage, and one account states that the passage was found full of the same material as the stone circle.

Negative evidence is therefore rather against a corbelled or megalithic roof, but if the monument was open, what purpose was served by the passage which was (and still is) covered with heavy slabs? It is conceivable that ritual demanded a humble approach to the sacred enclosure, and port-holes and other contrivances often rendered chambered barrows difficult of access; but this argument would be more convincing if the circle were roofed with a heather thatch on branches supported in the centre by a stout pole or living roof-tree. Such a theory would suit most of the conditions, but still leave undecided the date of the mound that certainly existed.

Apart from the cells and the problem of vaulting, the monument is of a fairly common type not only in Normandy but in Scandinavia, where it is supposed to mark the transition from the simple dolmen to the passage-grave with oblong chamber,¹ and the outer ring of stones would be quite in order. Scandinavian authorities, at least, appear to agree in dating the first erection of passage-graves (corresponding to our long-barrows) about 2500 B.C., and apart from further evidence that may come to light at any moment, the safest course is to place the Jersey monument a little earlier, making it about 4,500 years old. As the traces of fire can hardly be taken as proof of cremated burials, everything points to its erection in the Neolithic period, and in view of the spread of dolmen-building from the eastern Mediterranean to the Atlantic and Baltic coasts, it is not surprising that a parallel to the curious cells within the stone-circle should be found in Malta, at Mnajdra and Hagiar Kim.

¹ Montelius, *Der Orient und Europa*, 134.

A plan of the latter was published in the Report of the International Prehistoric Congress at Norwich in 1868, p. 410; and the former has been dealt with in some detail in a recent handbook of megalithic monuments, from which the following paragraph is quoted:

The Maltese cells are not like dolmens at all: they are either trilithons or tables resting on a pillar. They are always open to the front, and instead of the rough unhewn block which should cover a dolmen, they are roofed with a well-squared slab. If the pillar which supports the slab is, like the free-standing pillars, a baetyl, the slab is probably a mere roof to cover and protect it; if not, the slab is almost certainly a table. At the same time, although we may not accept the hypothesis that the cell is derived from a dolmen, Sir Arthur Evans may still be right in supposing the worship to have originated in a cult of the dead. But he was almost certainly wrong, as recent excavation has shown, in supposing that the cells were the actual burial place of the deified heroes.¹

It is well known that interments in a squatting position were often made in small box-like structures of stone slabs, and two skeletons back to back were found, for instance, in a recess of a passage-grave in Guernsey;² but it is clear that the cells of the Jersey monument were never closed in front, and would have been filled with earth when the mound was raised. Some other use therefore must be assigned to them, and a better parallel may perhaps be found in open-sided dolmens, common in Palestine beyond the Jordan,³ but also represented in Britain, apparently, by Kits Coty House near Maidstone. A similar recess is occasionally found at the entrance of passage-graves,⁴ the walls of the passage being continued beyond the transverse slab or door-stone; and it has been suggested that offerings to the dead were placed periodically in these receptacles. From this use to that of an altar is only a slight transition, but it is curious on that hypothesis that signs of fire have been found, not on the horizontal slab, but in the ground between the uprights. During the period in question, the altar may have taken precedence of the tomb, but that the two ideas are closely related is proved by the altar-tombs of the middle ages, and the Jersey monument may well have started as an open-air temple of many altars.

Attention may here be drawn to a curious Irish parallel at Slieve-na-Calliaghe or Sliabh-na-Caillighe (the Hag's mountain), co. Meath (fig. 3). Here there was a barrow over a megalithic

¹ T. E. Peet, *Rough Stone Monuments*, 106.

² *Journ. Brit. Arch. Assoc.*, i, 27 (F. C. Lukis).

³ M. J. Walhouse on non-sepulchral rude stone monuments (*Journ. Anthropol. Inst.*, vii (1878), p. 30).

⁴ *Journ. R. Anthropol. Inst.*, xxxix, 521 (Lough Gur).

chamber which was originally roofed, the greatest span being 10 ft. less than the Jersey monument. The interior partitions were not covered with slabs, but charred bones were found on and below flagstones on the floor. The orientation of the passage was also the same. The following is taken from Mr. William Frazer's description in *Proc. Soc. Antiq. Scot.*, xxvii (1892-3), 303, pl. viii and figs. 12-19.

'The cairn (designated by the letter I) was 21 yards in diameter: only 4 or 5 ft. of the original structure remained, and the roof

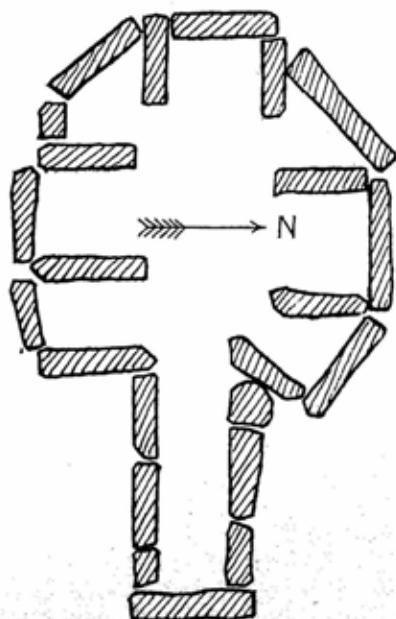


Fig. 3. PLAN OF MEGALITHIC CHAMBER, CO. MEATH.

being removed, the interior had filled with small stones. Through them the long roots of nettles penetrated, and when the cairn was cleared out, portions of the engraved surface of the stones crumbled down, forced out by these roots, before they could be drawn. The entrance-passage lay due east, and was $8\frac{1}{2}$ ft. long and $4\frac{1}{2}$ ft. wide. From the commencement of this passage to the back part of the opposite chamber measured 22 ft., and across the chamber from north to south was 13 ft. The interior consisted of seven compartments, separated by vertical flagstones, as shown in the plan. On four of the floors rested square flags 2 ft. across and 2 in. thick, on which charred bones were found; when the flags were raised, a layer of dry

small stones was seen that reached about 4 in. in depth and had scattered fragments of charred bone on top. In the compartment facing east, on the layer of finely-broken stones, was a bead $\frac{3}{4}$ in. in diameter, and a pendant $1\frac{1}{2}$ in. long, made from some kind of stone that had greatly decayed.¹

This cairn yielded nine stones with incised sculpturings, eight of which are illustrated in the account quoted. Internal partitions of the same kind have been found in Guernsey (*Journ. Brit. Arch. Assoc.*, iv, 335).

The date and purpose of the earthen mound are points to be considered, but the evidence was probably swept away when the stones were laid bare. It may be presumed with confidence that the original structure dates from the megalithic period, that is, one of the later stages of the neolithic, when the same architectural ideas prevailed in most of the coastal regions from the Mediterranean to the Baltic. If the plan resembling a jews' harp succeeded the dolmen and preceded the oblong chamber with passage, a sepulchral monument on these lines would precede the long-barrows enclosing an oblong chamber with entrance passage; but it is very doubtful if the Jersey structure was originally meant for burials. The open cells are a good argument against any neolithic origin for the covering mound, for megalithic building was in favour right down to the Bronze Age, and adepts in the art would be the last to heap earth over what they would recognize as a free-standing monument. It is reasonable to suppose that the mound was due to people of a later date, with other traditions and burial customs; and Bronze Age settlers, who normally raised barrows over their dead, may have utilized the site, and perhaps the megaliths themselves, for interments. It might be argued that the low surrounding wall mentioned above, which had a diameter of about 40 ft., was the containing wall of a barrow (as often found in Yorkshire), but they are often found encircling megalithic monuments over which no mound remains. Mound-building was a long-lived practice, but certain periods are ruled out in this case, as Roman coins are said to have been found in the mound.¹ There are, indeed, Roman burial mounds in Britain, for instance the Bartlow Hills at Ashdon, Essex, but a Bronze-Age date is much more probable. It is true that many chambers of a similar plan, without the cells, have been found in a presumably neolithic mound in Normandy, at Fontenay-

¹ Disturbance in Roman times has been also noticed in Brittany (*Matériaux pour l'histoire de l'homme*, xiv (1879), 146, pl. v); at Wick Barrow, Stogursey, Som. (H. St. G. Gray, *Excavations at Wick Barrow*, pp. 21, 32, 61); and at West Kennet long-barrow, Wilts. (*Archaeologia*, xxxviii, 411).

le-Marmion, near Caen,¹ but British long-barrows contain megalithic buildings of rather different character, as illustrated by Thurnam in *Archaeologia*, xlii, pl. xiv.

The precise relation between the neolithic house and the

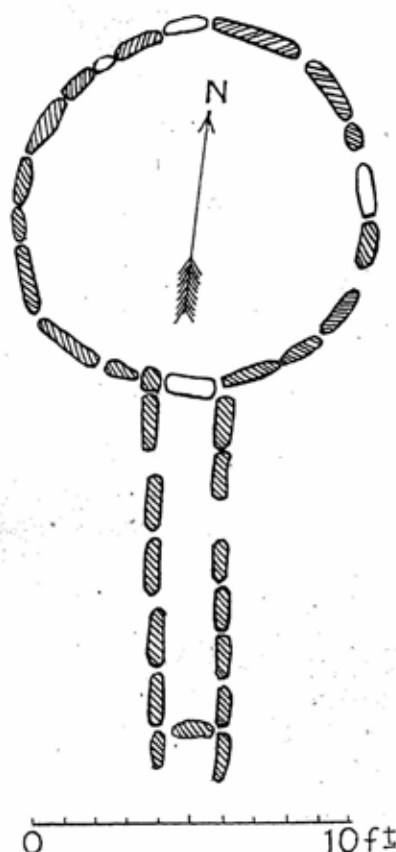


Fig. 4. PLAN OF NEOLITHIC HOUSE, PLÉNEUF, CÔTES-DU-NORD.

passage-grave has been much debated,² but there can be no question as to the resemblance of the Jersey monument, at least in plan, to a neolithic house at Pléneuf,³ on the French coast,

¹ Montelius, *Der Orient und Europa*, 61.

² References in T. R. Holmes's *Ancient Britain*, 102.

³ Fournier, 'Enceintes gauloises de la Ville-Pichard en Pléneuf', in *Bulletins et Mémoires de la Société d'Émulation des Côtes-du-Nord* (St. Brieuc, 1887), xxv, 250.

twenty-two miles west of St. Malo and twice that distance from St. Helier's (fig. 4). Unfortunately the original publication is inaccessible in England, but the reproduction by Professor Montelius in *Archiv für Anthropologie*, xxiii, 461, fig. 35, gives an inside diameter of about 11 ft. for the ring, and a length of about 12 ft. for the passage. Two circular dwellings, 13 ft. in diameter, each approached by a passage, have been found in Cornwall.¹ It is also significant that hut-circles on Dartmoor are invariably round and generally have, like the Jersey monument, an internal diameter of 23 ft.² Burials have been found within them, as in the Bronze-Age dwellings of the Celts in Spain,³ and the boundary line between tomb and dwelling is therefore ill-defined in prehistoric times.

Thanks to the devotion of Marshal Conway the monument exists to-day practically in its original form; and short of its preservation in the island, no better destination could be desired. To its presence is due the name of Templecombe, part of the grounds of Park Place, on the high bank of the Thames, one mile south-east of Henley. Through the good offices of Mr. Harry d'Almaine of Abingdon, I have been very kindly shown the monument by the present owner, Mr. Heatley Noble, who has cleared the undergrowth away from the stones, and may be trusted to preserve them to the satisfaction of all lovers of antiquity in Britain and Jersey alike.

The CHAIRMAN drew attention to an account of the great temple of Hal Tarxien in a recent volume (lxvii) of *Archæologia*, and many points in the paper reminded him of that neolithic structure in Malta. An analysis of the Jersey monument pointed to a combination of the dolmen and the elementary house, and the dolmen seemed to him to be an earlier and rudimentary stage. The kernel of an Egyptian temple was nothing more than an elaborate dolmen, and similar structures were found in many parts of the world. He had seen a woman building one in Bolivia, on a spot surrounded by 100 or 150 others of the kind, so that the type was not confined to the old world. He thought it highly improbable that the Henley monument was ever roofed, apart from the passage, and yet it was curious that, whatever its original purpose, it should ever have been covered with a mound.

Mr. A. L. LEWIS thought that the plan published in the Report of the Norwich Congress of 1868 was intended to

¹ W. C. Lukis, *Prehistoric Stone Monuments of the British Isles* (Cornwall), plates xxxv and xxxix.

² *Journ. Brit. Arch. Assoc.*, xviii, 117, and pl. vii.

³ Louis Siret, *Chronologie et ethnographie ibériques*, i, 135.

represent the monument now at Henley. Lukis mentioned a parallel in the Isle of Man and might have been thinking of Maughold, which certainly bore a general resemblance to it, but was imperfect. The Channel Islands were geographically Gaelic and not British, and therefore the type must be sought on French soil: the tumulus at Fontenay-le-Marion, Calvados, contained eight or more chambers of that type. He doubted if the neolithic house shown on the screen was really a domestic structure; and thought the Henley monument had at one time been roofed. The accounts said little about finds in the interior, and the vault might have been supported by a central tree.

Mr. DALE was reminded by the plan of the great chambered barrow at Uley, Gloucestershire, and was surprised to hear that the Jersey monument was not of the same class. He saw no object in heaping earth over it at a later date.

Mr. LELAND DUNCAN suggested a comparison with the well-known Irish monument of New Grange, near Drogheda.

Mr. SMITH replied that the great monuments of Gavrinis, Loughcrew, and New Grange were hardly comparable with the modest structure at Henley; and thought that the walls were not suitable for supporting a corbelled roof. He was familiar with the Fontenay chambered mound, and agreed that it proved the same plan to be appropriate for burials, but the main point was the addition of cells or altars to the monument under discussion. It was certainly exceptional and worthy of the Society's consideration.

REGINALD A. SMITH, Esq., read a paper on circular bronze shields, with special reference to a specimen from the Lea valley, exhibited by Captain Frank Corner, R.A.M.C.:

In spite of over thirty discoveries in the British Isles, the precise date and original purpose of our embossed and corrugated bronze shields are still unknown, and the addition to the list of two unpublished specimens endowed with all the fine qualities of their kind, throws little light on the two main problems.

As will be seen in the table below, Captain Corner's shield from the Lea valley (fig. 1) is only exceeded in size by two others, which were found in Scotland and Ireland. It has a diameter of $26\frac{1}{2}$ in., ten concentric ribs besides the turned-up edge, and a central boss $5\frac{1}{2}$ in. in diameter, behind which the bronze handle is intact, fastened by one rivet at each end. In a line with one of these rivets at right-angles to the axis of the handle

are two pairs of small rivets, two of which serve to attach a pair of small pierced lugs to the back of the shield. This is a common feature, but the openings are seldom as small as in this case, and they would only admit a wire that could not be depended on to bear the weight of the shield. The openings in these movable lugs are sometimes large enough for a strap by which the shield might be suspended, but the two Welsh specimens in the British Museum have holes about the same

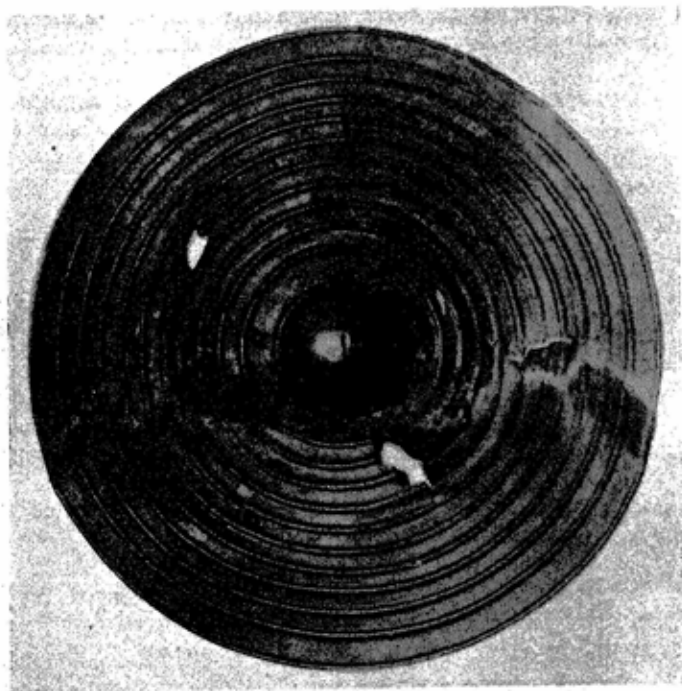


Fig. 1. BRONZE SHIELD, FROM THE LEA VALLEY ($\frac{1}{3}$ LINEAR).

size as those on Captain Corner's shield, and are besides complete and undamaged. The lugs are normally loose enough to be turned round on the rivet, but seldom allow space for any material but the thinnest of metal plates to be inserted between them and the disc of the shield. The inference is that the shields were used in their present condition without any backing of wood or leather, yet they are too thin and pliant to be of much use to parry a blow or spear-thrust. The workmanship is generally of the highest order, so that they should perhaps

be regarded as weapons of parade rather than for use in warfare.

As pointed out by Sir John Evans, they are not cast but beaten out of the flat, no doubt with the aid of mandrils, an operation requiring constant heating and considerable skill. The present specimen, like several others, is indeed of the same character as the Weybridge bucket presented by our Fellow Mr. Dale to the British Museum, which belongs to a well-known class found scattered over western Europe, and traced to workshops in Venetia dating from about the seventh century B.C.¹ Other specimens with broader zones are more suggestive of the Hallstatt type of bucket with broad cordons, as figured in *Archaeologia*, lxvii, pl. xxvii, and assigned to the latter part of the eighth century B.C.; but this comparison is not nearly as striking as the other, which (in default of a better) may serve as a lower limit of date for the round shields of our islands.

The other unpublished shield (fig. 2), 25.7 in. across, was given to the British Museum in 1916 by the late Lord St. Oswald with a Bronze Age spear-head 17½ in. long, having small loops in the angles between the base of the blade and the socket. This type has been found with rapiers at Maentwrog, Merionethshire,² and may with confidence be dated before the end of the Bronze Age, but unfortunately this does not suffice to date the shield, as Sir Hercules Read was informed by the donor that the shield and spear-head were not found in association, though both came from Brumby Common, near Scunthorpe, Lines., and it is curious that another shield, now in the National Museum, Dublin, was discovered in 1848 on Burringham Common. It has a diameter of 26 in. and nineteen concentric ribs and zones of bosses. Burringham and Brumby are three miles apart in North Lincolnshire, and between them are their respective commons, so that the two shields and spear-head may possibly be contemporary. To regard them as evidence of a battle would be mere speculation, but in any case the date of the spear-head may be taken as the upper limit for the shields. It is as well to note also that the Athenry buckler was found in a mound or earth with a large bronze spear-head,³ which, however, cannot be identified in the series from the Londesborough Collection now in the British Museum. In the Cambridge Museum of Archaeology, however, are preserved a fine bronze spear-head, 9½ in. long, and part of a shield, with close-set bosses in many zones, found together at Chatteris in 1852. The

¹ *Proceedings*, xxi, 469.

² *Archaeologia*, xvi, pl. lxx; the hoard is in the National Collection.

³ *Horae Ferales*, p. 167, fig. 1.

spear has a leaf-shaped blade, at the base of which are two openings with lozenge-shaped plates on the outer edge, much like a Thames specimen in *Archaeologia*, lxi, pl. lxxv, fig. 28. These 'protected loops' are apparently earlier than the large series of spears without loops, and therefore date soon after the middle of our Bronze Age. Prof. Montelius includes them in his fourth period (1400-1150 B.C.) and illustrates two in *Archaeologia*, lxi,

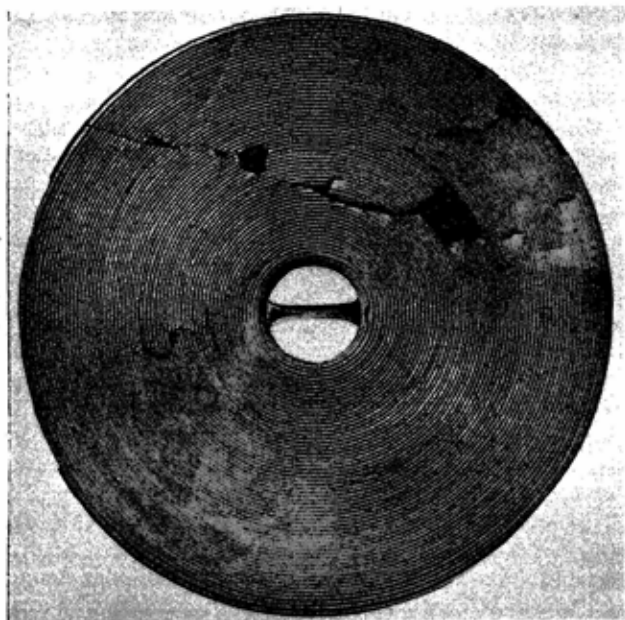


Fig. 2. BRONZE SHIELD (BOSS MISSING), BRUMBY COMMON, Lincs.
(ABOUT $\frac{1}{2}$ LINEAR).

139, fig. 126, and pl. xv, fig. 113. The Brumby spear-head is a variety of the same type, and all in favour of a similar date for the shields.

In his *Early Age of Greece*, i, 453, Professor Ridgeway devotes a chapter to the round shield, and shows that the form with central boss succeeded the Mycenaean oblong and preceded the heraldic disc, without a central boss, of classical Greece. In his opinion the round shield with boss came from the Danubian region and was characteristic of the Achaeans and Hallstatt people. He illustrates (figs. 86-91) the Burringham, Coveney Fen, Beith, Yetholm, and Lough Gur specimens, the last being

the largest from the British Isles and weighing 5 lb. $2\frac{1}{2}$ oz. In view of the lugs already described, his statement that 'it may be taken as certain that all had leather linings' may need some modification, but he rightly lays stress on the discovery of one (with two handles for the arm, not a central grip for the hand) in an archaic Etruscan tomb, Tarquinii (Corneto), dating about 1150-1100 (late Mycenaean—Dipylon), and containing not a vestige of iron.

A similar date (1200-1000 B.C.) is assigned by Reinecke to a shield found at Bingen on the Rhine, $15\frac{1}{2}$ in. in diameter, with a few concentric ribs and bosses. To his Hallstatt A period are also attributed three of another type, with the ornamental rings notched.¹ This peculiarity has been commented on by Mr. Coffey in a paper by our Fellow Mr. Armstrong on a leather shield found in Ireland.² As the Klein-Glein (Styria) example has no central boss and has a design recalling one from Coveney Fen, it is possible that the series with concentric rings and zones of bosses are before that date (850-700), and the elaborate embossed decoration of the Mold peytrel should not be far removed in date. Indeed, Professor Montelius in *Archaeologia*, lxi, pl. xvii, includes one of the Yetholm shields in his fifth period of the Bronze Age (1150-800 B.C.), a dating that has been challenged by Sir Arthur Evans in *Proceedings*, xxii, 128, where he classes the co. Limerick shield with Hallstatt finds in these islands. It is a subject on which much has been written, and a final solution may be shortly expected.

Foreign evidence is in favour of a Hallstatt date for our series, but it is still a question whether our Iron Age began before 400 B.C., and the shields may therefore still belong to the Bronze Age in Britain. In spite of their general resemblance to a few found abroad (e.g. three in Madsen's *Antiquités préhistoriques du Danemark*, plates 15-17), the comparatively large number from our islands may be taken as proof of their production at home, imports of the Hallstatt period being by no means common. Their distribution also points in that direction, and the occurrence of three within a small area in North Wales may be due to the midland trade-route to Ireland.³ The following table gives in geographical order the specimens mentioned by Sir John Evans,⁴ with a few additions and the present home of several:

¹ *Alterthümer uns. heid. Vorzeit*, v. 397; vol. i, 11, 1, figs. 4, 5; vol. iii, 7, 2, figs. 1-3.

² *Proc. R. Irish Academy*, xxvii, c (1909), pl. xiv, reproducing the Bingen, Magdeburg, and Halland specimens from Lindenschmit, as well as one of alder-wood from co. Leitrim.

³ For other references see W. J. Hemp, F.S.A., in *Proceedings*, xxx. 167.

⁴ *Bronze Implements*, pp. 343-56.

ENGLAND.

		Diam.	
	Corbridge, Northumberland (Aydon Castle) ¹		
Alnwick	Ingoe, Stamfordham, North- umberland ²	20 in.	Corrugated.
	Ingoe, Stamfordham, North- umberland ²		Small bosses.
Newcastle-on-Tyne	Chester-le-Street, Durham		
Dublin	Burringham Common, Lincs.	26 in.	
Brit. Mus.	Brumby Moor, Lincs.	25½ in.	Corrugated.
	Bagley, Shropshire	23 in.	Small bosses.
Cambridge	Chatteris, Cambs.		Small bosses.
Cambridge	Coveney Fen, Cambs.		Plain ribs.
Cambridge	" " (Serpentine)	21 in.	
Private	Sutton (Stalham), Norfolk	20½ in.	Small bosses.
Soc. Ant. Lond.	Eynsham, near Oxford	9½ in.	
Brit. Mus.	Little Wittenham, Berks.	13½ in.	Buckler, large bosses.
Private	Lea Valley	26½ in.	Plain ribs.
	Thames, between Hampton and Walton	26 in.	
Trinity House	Thames, off Woolwich		Small bosses.
Brit. Mus.	" (Roach Smith Col- lection)	21½ in.	Small bosses.
Brit. Mus.	Thames	21 in.	Medium bosses.
Brentford	"		<i>Archæologia</i> , lxix, 16.

WALES.

Brit. Mus.	Aberystwyth	26½ in.	Small bosses.
Brit. Mus.	Moel Siabod	25½ in.	Small bosses.
	Harlech	22 in.	Plain ribs.

SCOTLAND.

Soc. Ant. Lond.	Beith, Ayrshire (several)	26½ in.	Small bosses.
Edinburgh	Yetholm, Roxburghshire ³	23½ in.	Small bosses.
Edinburgh	" "	24 in.	Small bosses.
	" "	22½ in.	Small bosses.
Edinburgh	Mitchell Hill, New Deer, Aberdeenshire		Corrugated.

IRELAND.

	Near Lough Gur, Limerick, Ballynamona or Herberts- town	27½ in.	
Brit. Mus.	Athenry, Galway	14 in.	Buckler, large bosses.
	Toome Bar, Lough Neagh		

¹ J. C. Bruce, *Catalogue of Alnwick Castle Museum*, p. 63, no. 270, pl. xvii a, fig. 2.

² Bruce, *op. cit.*, p. 62, nos. 268, 269, pl. xvii a, fig. 3, and restoration on p. 64.

³ Our Fellow Mr. Alexander Curle kindly informs me that the illustration of this shield in *Cat. Nat. Mus. Edinb.*, p. 149 (Evans, *Bronze*, fig. 435) is inaccurate. It has 24 ribs, and the second 30. A third (now apparently lost) is described in *Proc. Soc. Ant. Scot.*, v, 393.

As already stated, the pierced lugs on several specimens are set too close to admit any but the thinnest metal backing, of which there are no traces: leather or wood seems out of the question, and most of the shields are too thin to have afforded any protection in warfare. Some other purpose is therefore indicated, and the Beith find throws some light on this point. The Society possesses only one of the five or six shields placed on their edges so as to form a ring in a peat moss on Luggton-rigge farm, near Giffin Castle. The discovery was made in 1780, and is good evidence that these were not accidentally lost but purposely placed where found as a votive offering. Others have been found in swampy ground,¹ and in the bed or neighbourhood of rivers, and comparison is inevitable with the moss-finds of Denmark, on which there is an instructive chapter in Dr. Sophus Müller's *Nordische Altertumskunde* (1897), i, 422. Discoveries of this kind generally date from the late Bronze or early Iron Age, precisely the period to which our own specimens would be attributed. Some have come down to us in perfect condition, for instance the two from Wales, but many have been broken and pierced as if by spear or sword. Unless these were used in fighting, the only explanation seems to be an intentional mutilation or 'killing' at the time the offering was made, to discourage robbery or further use for secular purposes. There is plenty of evidence for this practice in prehistoric Europe, and Britain can hardly have been an exception to the rule.

Implements of copper and bronze from Spain, formerly in the collection of Canon Greenwell, were exhibited by Horace Sandars, Esq., F.S.A., and Captain John Ball, R.A.F.; photographs and lantern-slides of others in the Ashmolean were contributed by E. Thurlow Leeds, Esq., F.S.A.

REGINALD A. SMITH, Esq., F.S.A., read the following notes on the exhibits:

Any survey of the Bronze Age of Spain must be based on the remarkable discoveries made near the south-east coast between Cartagena and Almeria by the brothers Siret, which have been published with abundant illustrations in *Les premiers âges du métal dans le Sud-Est de l'Espagne*. Characteristic sets of antiquities have been distributed to various museums in Europe, and the detailed report of the excavations has been followed by several works from the pen of M. Louis Siret, who has tried to link up the various cultures disclosed with those in other parts

¹ Besides those from rivers, shields from the following sites were found in peat or marshy ground: Harlech, Beith, Yetholm, Aberystwyth, Moel Siabod, Ingoe (two), Coveney, and Ballynamona.

of Europe and the Mediterranean countries, and to identify the people who were responsible for each stage of culture. In this wide survey of prehistoric Spain he has made many interesting comparisons, and his close acquaintance with local specimens in quantity entitles him to a respectful hearing, even though his main conclusions run counter to accepted principles.

In addition to the first volume of his *Questions de Chronologie et d'Ethnographie ibériques* (1913), which is constantly referred to in the following notes, may be mentioned a long treatise in *L'Anthropologie*, 1908, p. 129; 1909, pp. 129 and 283; 1910, p. 281, entitled *Les Cassitérides et l'Empire colonial des Phéniciens*, in which he identifies certain islands off the south coast of Brittany as the ancient source of tin in the West.

The following is a summary of his main arguments. The late Quaternary culture survived in Spain among hunters and fishermen, who made and used diminutive trapezoidal flints, a recognized type that was not altogether suppressed by a neolithic invasion attributed to the Iberians, who introduced polished flint implements, incised pottery, and agriculture. They were in touch with the eastern Mediterranean; and fiddle-shaped idols, for instance, are common to Spain and the lower levels of Hissarlik (Troy). Parallel illustrations are given on his p. 18.

At the end of the neolithic period a batch of new types was introduced, the Phoenicians being credited with the exploitation of the country. They themselves were virtually confined to the Mediterranean, but apparently sent Iberian sailors further afield to collect foreign products. The native culture of this advanced period is characterized by polished stone celts, shell bracelets, well-made incised bowls, and the tulip-shaped or bell-beaker.

The Phoenician strangers were in contact with the highest civilization of the age, and brought to the West much that can be traced to its original sources. From Egypt of the eighteenth dynasty (about 1650-1400 B.C.) came finely worked flints and stone vases, ostrich eggs, elephant and hippopotamus ivory, female statuettes or idols, betyls or ritual stone columns, and the practice of erecting cupola graves, menhirs, and megalithic monuments. From Arabia, perfumes and alabaster flasks to hold them; from the Aegean, the mystic double-axe, and from the Orient, metallurgy, painted pottery, and a system of fortification for mining and trading settlements. Beyond the Pillars of Hercules, ships brought jet from England and amber from the Baltic; and perhaps the callaïs so common in Spanish and Brittany burials of the period was a product of the western alluvial tin deposits. The Phoenicians camped in dry water-courses that served as roads into the interior, and were specially

interested in the production of copper and argentiferous lead. Metal was therefore in use to a limited extent, and this Aeneolithic or Copper Age is dated by M. Siret 1550-1200 B.C.

About the later date the peninsula was, on this theory, invaded by Celts, who arrived not by way of France but by sea, from somewhere on the south coast of the North Sea. The Semitic population, driven out by these well-armed invaders, had to content themselves with coastal stations or easily defended promontories, and Gades (Cadiz) is known to have been founded not later than 1100 B.C.

The Celtiberian period began about 1200 and lasted till the introduction of iron about 800, the Hallstatt culture being dominant till about 450 B.C. In the early Bronze Age the Celts are supposed to have kept to their hill-forts or acropoles, burying their dead in large earthenware jars, and making use of standing cups, silver diadems, halberts, celts, daggers, and swords, the weapons being largely of copper or arsenical bronze (without tin), and not including arrow-heads or lances. At a later stage, merging into the Hallstatt period, they had more accessible settlements on the hills and practised cremation, using cinerary urns, swords of developed type, palstaves often with lead butts, celts with trunnions, socketed spear-heads, brooches, bracelets, collars, and ribbed arrow-heads. Tyrian colonists were then active, to be succeeded by Carthaginian settlers in the period of La Tène.

Such is M. Siret's presentation of the Spanish Bronze Age, and those familiar with the outlines of Western prehistory will at once recognize that his date for the introduction of bronze is much later, and the arrival of the Celts much earlier, than is generally recognized. Many points in the thesis have been criticized by Déchelette, who is in general agreement with the scheme of Professor Montelius, with the result that there is a difference of 1,000 years between the two estimates of the upper limit, as seen in the following table:

DATES FOR COPPER AND BRONZE AGES.

	Prof. Montelius.	M. Siret.
Period I (Copper)	2500-2000	1550-1200
II	2000-1650	1200-800
III	1650-1400	
IV	1400-1150	
V	1150-800	

The orthodox reply to this revolutionary thesis is given in *Revue Archéologique*, xii (1908), ii, pp. 210 and 393, a long review entitled *Essai sur la chronologie préhistorique de la péninsule*

Ibérique, and summarized by M. Hubert in *L'Anthropologie*, 1910, p. 87.

Déchelette chose as typical of the Spanish neolithic the settlement and burials of Los Millares, and contended that comparison should be made not with the sixth city of Hissarlik (the Homeric Troy), but with the second city on the hill (2500-2000 B. C.). Further, the identification of the aeneolithic population as Phoenician is disproved by Egyptian chronology, which fixes the Cycladic or Amorgos period before 2500 B. C., the date of Los Millares. Nor could he accept the theory that the foundation of Gades about 1100 B. C. marked the end, rather than the beginning, of Phoenician influence in the Peninsula.

To assign the Bronze Age to Celtic invaders who arrived by sea about 1200 B. C. is to contradict the approved evidence of archaeology and philology. El Argar, the typical Bronze Age settlement, can be equated with the Early Minoan of Crete and dated about 2000 B. C. (eight centuries before Siret's date); and the philologists do not recognize any Celts in the peninsula before 500 B. C. The Hallstatt culture came by the overland route and might easily have been delayed.

Though the primitive flat celt of copper or bronze is common in the peninsula, it is a curious fact that other early stages in the evolution of the celt are, so far as is known, unrepresented south of the Pyrenees, and M. Siret's diagrams are much to the point (see his pp. 334, 337, 342, 348). The sequence represented in fig. 1, nos. 1-3 (his fig. 121), is well illustrated by the specimens on exhibition. A celt nearly 8 in. long, with oblong section, almost parallel sides, and slightly spread edge comes from Olivenza, fifteen miles south-west of Badajoz on the western frontier; the second form with expanding edge and tapering butt from Aguilar, thirty miles south of Cordova in south Spain, measures $7\frac{1}{4}$ in. in length; and the type with sides parallel as far as the middle and the cutting-edge much expanded is represented by a 6 in. specimen from Coruña del Conde, province of Soria in the north. One of this last pattern was evidently found and utilized in the Iron Age by adding a heavy iron socket to it, fixed by three rivets. The mode of hafting recalls a bronze specimen in one piece, 7.1 in. long, from Cuenca, which, however, has a pointed blade more in the form of a halbert (fig. 1, no. 4).

With the Aguilar celt just mentioned was found a triangular dagger-blade (fig. 1, no. 6) 8 in. long, of rather clumsy workmanship, with three rivet-holes (one square) for fastening the handle. The type is assigned by Siret to the full Bronze Age, but most authorities would give an absolute date for the find

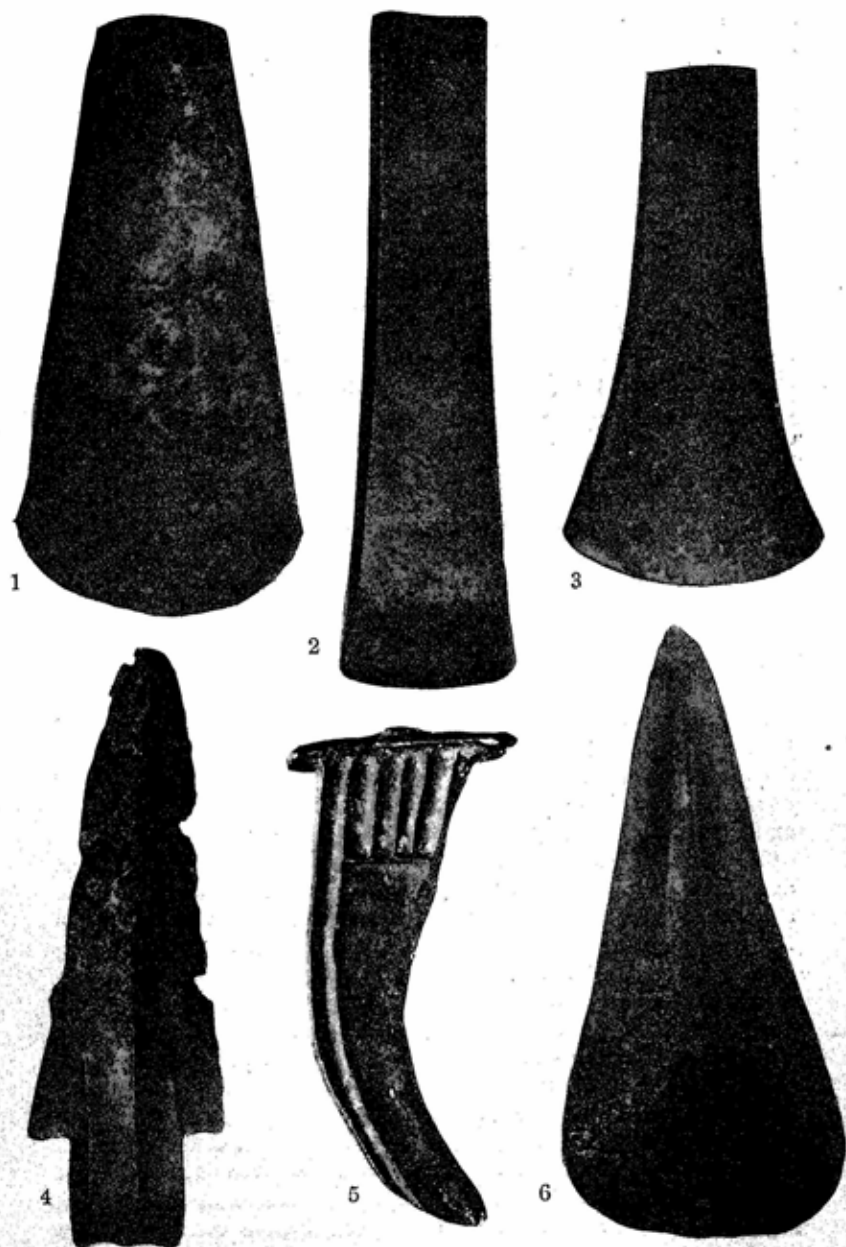


Fig. 1. COPPER AND BRONZE IMPLEMENTS FROM SPAIN ($\frac{2}{3}$).

a good deal earlier than 1200 B.C., his upper limit for Spanish bronze.

More slender daggers like fig. 3, nos. 4 and 5, and two now in the Ashmolean Museum, are no doubt later; and the silver rivets still remaining in one (fig. 3, no. 4) from Villacarrillo, province of Jaen, testify to the abundance of that metal in Spain: otherwise implements of such unpretentious form would hardly have been mounted with precious metal. A more tapering form from Ecija, Seville (fig. 3, no. 10), with long broad tang having three rivet-holes in the central line, has the rubbed and unrubbed surfaces divided by a sloping line that lends colour to M. Siret's suggestion as to the hafting of this form as a halbert (see his fig. 48, which, however, has two rivet-holes, one on either side of the central rib); but perhaps this unusual appearance of the tang is merely due to faulty casting, and the rivet-holes are certainly in position for a dagger. The length over all is $10\frac{1}{2}$ in.

The bronze blade represented by fig. 3, no. 1, from Villacarrillo, province of Jaen, 6·7 in. long, is more likely to be a curved knife than a sickle, and though apparently a rarity in Spain, is common in the Eastern Mediterranean and still farther east, a point that will be noticed presently. It has been presented by our Fellow Mr. Horace Sandars to the British Museum.

A bronze sickle (fig. 1, no. 5) 6·4 in. long from Miranda, Asturias, is very like that figured by M. Siret (his fig. 157) from Castropol¹ in the same province, and now at Madrid. He implies that the type is very rare, and is in some perplexity with regard to its date, as the ornamentation (confined to one face) and the projections for hafting differentiate it from the French series and others farther east.

The bronze sword in Spain belongs to the early Iron Age, and has features distinguishing it from contemporary or earlier specimens elsewhere; but in the early Bronze Age (as at El Argar) appeared a rather clumsy weapon resembling an elongated dagger that was attached to the handle by rivets in a row across the broad end. One of these weapons, measuring $22\frac{1}{2}$ in., was exhibited (fig. 2), and may be compared with one in the British Museum from El Argar, $20\frac{1}{2}$ in. long. M. Siret illustrates examples on p. 383, the longest being about 26 in., and assigns them to the early Bronze Age. The blade is broad and flat, constricted just above the handle, which is fixed by means of rivets; and the type is associated with isolated burials in the hill-forts of Spain. The edges are slightly convex and the point rather blunt, hence it must be regarded as a cutting (not a

¹ Another from Castropol is in the British Museum (Greenwell Collection).

thrusting) weapon, some examples showing signs of use on the edges. The material moreover is copper, which would have little penetrating power. They were evidently made in Spain, possibly at a single centre, at a time when tin was unprocurable.

Spear- and lance-heads are more common and the collection contained six specimens, all with sockets and central ribs: two have the greatest width near the base of the blade, which has incurved sides producing a long tapering point (fig. 3, nos. 7, 8), and the others are more or less leaf-shaped (fig. 3, no. 9). M. Siret points out (p. 402) that tanged lance-heads of copper occur in the aeneolithic of Spain, but never in the hill-forts (acropoles) that he ascribes to Celtic invaders of the Bronze Age; and he attributes the socketed bronze patterns to the Hallstatt period (800-450 B. C., see his plate I). Contemporary with these are



Fig. 2. EARLY COPPER SWORD FROM SPAIN (L. $22\frac{1}{2}$ IN.).

the celts with 'trunnions' (like the projections or axis for mounting a gun) and the socketed celt with two loops. The former is represented by two bronze specimens (7.6 and 6.4 in. long, see fig. 3, no. 2) that must be closely allied to those of iron found at Hallstatt itself (*Archaeologia*, lxxiii, 149, fig. 9), and few would doubt the Celtic origin of this form, which is fully illustrated by M. Siret (his pp. 361-7). An iron specimen found in grave 298 at Hallstatt with a bronze sword is assigned by Hoernes to his period I (750-600 B. C.).¹

The socketed celt with two loops (fig. 3, no. 3) is, according to M. Siret (p. 359), a rare form, though more often found in Portugal than the single-looped variety common elsewhere in Europe. The flattening of the socket is in itself a late feature, seen also in the iron specimen without loops from Hallstatt illustrated in *Archaeologia*, lxxii, 149, fig. 10. The different metals employed in different parts of Europe at the same stage of culture corroborate the view that Spain, at the extremity of Europe and practically isolated by the Pyrenees, was late in acquiring the iron culture that spread overland. Spain owed her earliest civilization to maritime intercourse with the eastern Mediterranean, which was considerably reduced after the aeneolithic period.

¹ *Compte rendu*, Monaco Congress (1906), ii, 78.

Even the present small series indicates such a connexion, and in addition presents some curious resemblances to Russian and Siberian forms, which may well have been derived from a common source. The curved knife, as fig. 3, no. 1, is common in the Siberian Bronze Age, also the flattened celt with socket and two loops (fig. 3, no. 3, and Siberian parallel in Evans, *Bronze*, fig. 179). This type is illustrated in the *Khanenko Collection*, part i, pl. x, and an iron celt with trunnions like fig. 3, no. 2, is given in part V of the same work, pl. v; see also *L'Anthropologie*, 1892, 381.¹ Such peculiar types associated in areas so far apart almost necessitate a link between them, and there are other grounds for regarding the Aegean as the centre of distribution. The subject cannot be further dealt with here, and it will suffice to refer to E. H. Minns's *Scythians and Greeks*, cap. ix; Déchelette, *Notes sur les influences égéennes au Caucase* (*L'Anthropologie*, xxi (1910), 425); Reinecke, *Mittheilungen der anthrop. Gesellschaft in Wien*, xxxii (1902), 104; and Rösler's summaries of Russian official excavations in *Zeitschrift für Ethnologie*, vols. xxviii–xxxiii.

Future discoveries may throw light on the subject, but at present the palstave of Spain has no ancestral forms in the country. Whether with one or two loops, it is assigned by M. Siret to the Hallstatt period, whereas in north-western Europe it would belong to the second half of the Bronze Age, having all the stages of its evolution clearly marked from the flat celt of copper. Two with single and five with double loops were exhibited, two of the latter having jets or runners at the butt that are now seen to be anything but accidental. The more complete is all bronze (fig. 3, no. 6), but another, now at Oxford, has a cup-shaped butt that almost certainly had at one time a filling of lead.

The palstave with two loops is pre-eminently an Iberian type and belongs more especially to the west of the Peninsula. Isolated examples have been found in the south and even in the north of France, and overseas in Sardinia and Britain, where examples are confined to the south-west (West Buckland and Cheddar in Somerset, and Penvores, Cornwall).² Two from Ireland³ were included in the Society's Bronze Exhibition of 1873 (*Proceedings*, v, 398, 422, 428), one coming from Ballinacollig, co. Cork. These localities all point to Spain or rather Portugal as the centre of distribution, and the evidence of

¹ Baron de Baye, *Notes sur l'époque des métaux en Ukraine* (pp. 1 and 374). The bronze specimen from Kertch, engraved with a horned animal (*Archaeologia*, lviii, 12, fig. 13), may also be mentioned in this connexion.

² *Proceedings*, xxi, 138; Map and list, xxiv, 43, 48.

³ G. Coffey, *Bronze Age in Ireland*, 27.

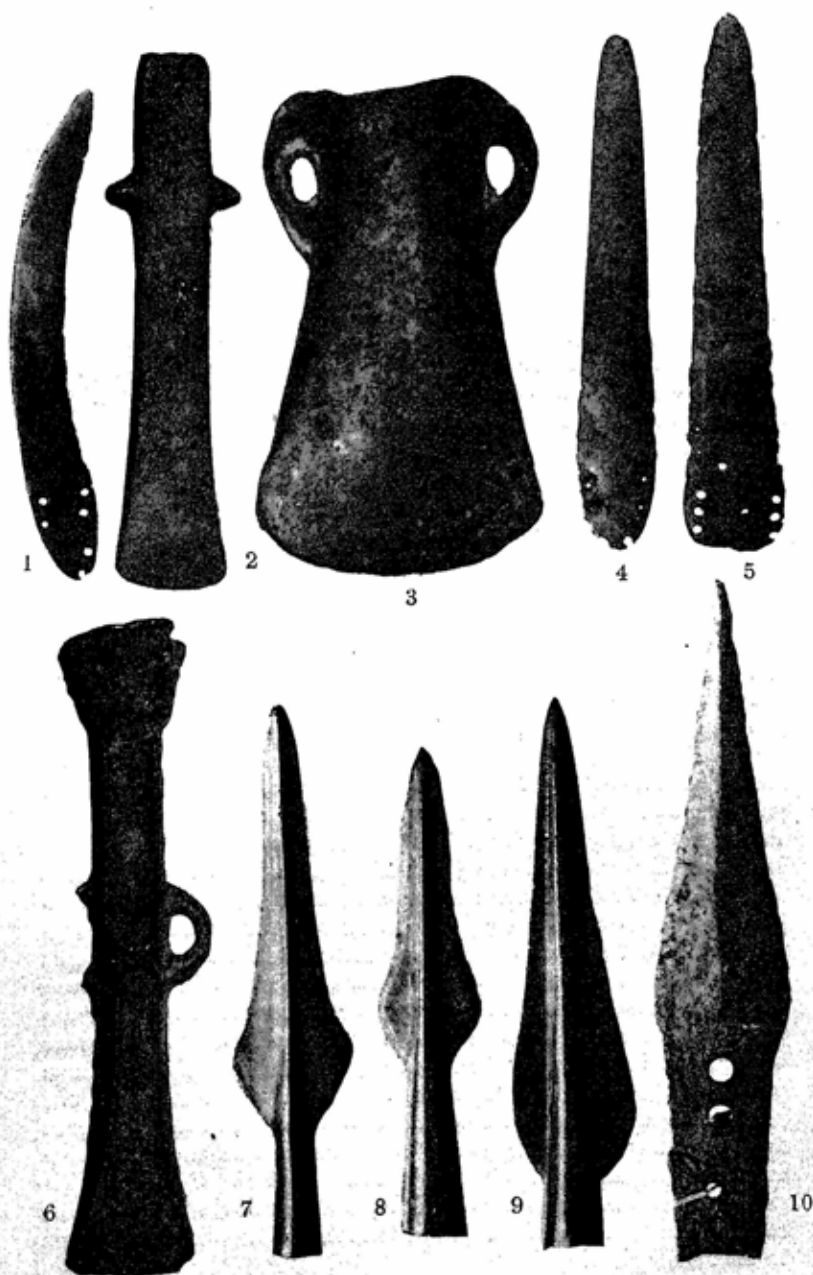


Fig. 3. BRONZE IMPLEMENTS FOUND IN SPAIN (3).

communication with the British Isles is of special interest. But the principal feature of the Iberian specimens is not the extra loop, but the lump of lead attached to the butt-end. Though apparently destroying the balance and utility of the implement, this addition was evidently intentional and has been fully described by M. Siret (*op. cit.*, pp. 353 and 463). The lead is generally at the butt, though patches of it occur sometimes about the middle and even on the blade, and the fusion is imperfect. This proves that the two metals were not cast together, as a homogeneous alloy would have been produced in a short time; and it is clear that the lead was added to the bronze when the latter was still in a fluid state but already in the mould. M. Siret has experimented with double moulds, such as would produce similar implements together with the terminal cone. He poured bronze into the cavity till it reached the smaller end of the cone, and at once filled the cone with lead. Being the heavier metal, the lead passed into the bronze and mixed irregularly with it, but to test the degree of fusion in ancient specimens, it would be necessary to saw longitudinally through the butt.

Even when skilfully produced, an alloy of lead and bronze would have been too brittle for use as tools or implements, nor could it have had any value as a medium of exchange. Fraud is out of the question as the metals are easily distinguished, and there is no attempt to economize material, there being enough bronze to make a sound and serviceable implement. Further, if adulteration had been the object, the metals would have been mixed in the crucible. The cone is, or has been, present on half, or more than half, the specimens of this type in the Peninsula, and so far from being a drawback must have been intentionally produced for a definite purpose. M. Siret points out that the double-looped palstave meant for use had the loops placed level with the head of the groove for hafting, whereas those with the lead cones were evidently made in special moulds with the loops placed above or below the head of the groove; and he concludes that the specimens thus rendered unfit for use were made for religious purposes. The cult of the axe was widespread in the prehistoric world, and hoards of them have been found, suggesting their use as *ex-voto* offerings. All the palstaves with lead additions have two loops, and this preference for a symmetrical arrangement he connects with the anthropomorphic tendency that is well illustrated in Spain. This explanation may possibly serve as a clue to the meaning of the lead celts found in Britain, that have long been a puzzle to archaeologists.

The date and meaning of certain model axe-adzes in gold (fig. 4)

constitute a minor problem. They vary in length from 1·2 in. to 0·7 in., and the three largest have a central round hole for hafting or stringing, the two cutting-edges being in planes at right-angles to each other. The cult of the double axe, which centred in Minoan Crete, spread widely in the Mediterranean area; and symbolic mounted adzes of aeneolithic date have been found in Portugal, so that there is some warrant for regarding these miniature gold specimens as amulets. A good parallel for the form is a full-sized bronze axe-adze belonging to a primitive group (including flat celts like fig. 1, no. 2) found in the Greek island of Thermia (the ancient Cythnos),¹ and dating probably before 2000 B.C. Similar axe-adzes, no doubt derived from the same source, have been found in Bohemia,² Hissarlik, and Sardinia, and there is one from Athens in the British Museum.

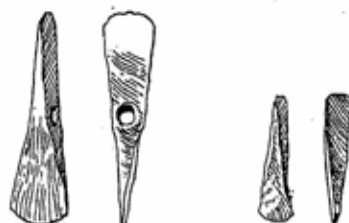


Fig. 4. MODEL AXE-ADZES OF GOLD (FRONT AND SIDE VIEWS), FROM SPAIN ($\frac{1}{2}$).

The models from the Greenwell Collection came with many others from the sands and gravels of the river Guadalquivir at Alcalá del Rio, near Seville, where they have been found in some quantity, at a spot where part of a Roman camp has been precipitated into the river by the undercutting of a steep bank. The natives sell them for their bullion value, and Captain Ball has himself secured one by diving and searching in the river bed, and saw on sale half a dozen of various sizes. All are of 23 carat gold, and, of four specimens, two weigh 60 grains, one 20 grains, and the other 16 grains. Mr. Bonsor found some, dating apparently from the sixth century B.C., at Carmona, twenty miles east of Seville, and many bronze examples have passed into M. Louis Siret's collection. Six, including some double axes, and ranging in length from 0·6 to 0·9 in., came from a Punic burial (450–200 B.C.) at Villaricos, and a contemporary burial in the same cemetery contained about sixty bronze models of both types but without perforation, only

¹ Brit. Mus. *Bronze Age Guide*, fig. 119.

² Bronze Age parallels in Spain and Bohemia are illustrated by Siret, p. 154.

0.4-0.5 in. long, also a 'mystic eye' of Egyptian origin, two ear-rings, and a bead, all of gold.

The centre hole would enable these amulets to be strung on necklaces, and it would be curious to find surviving in the period of La Tène the cult of the double-axe, which even then was of venerable antiquity. Its extension to the north may be traced in the amber beads in the form of an axe dating from the megalithic passage-graves of Scandinavia; but it is difficult to see how unperforated models of gold or bronze little more than half an inch long could have been easily handled, and more evidence is required to clear up difficulties with regard to their date and significance.

The CHAIRMAN said there was no time to discuss many points raised in the papers, which covered much ground and a lengthy period. If a spear of the type found with rapiers in Wales had really accompanied the Brumby Common shield, there was good reason for placing most of the shields well in the Bronze Age. He was convinced that both Montelius and Déchelette extended the period unduly and made it end too soon. In Italy the Bronze Age lasted till the end of the seventh century. When the Villanova culture was first discovered it was dated about 1000 B. C., but no one at the present day would place the stage known as Benacci I earlier than 800, or Benacci II before 700. Benacci I was scarcely Iron Age, and it was unlikely that the Bronze Age ended in Britain before that date. In his opinion Siret's theory of 'killing' the palstave by adding a lump of lead to the butt was unsatisfactory; and he preferred to regard the lead as an addition to give weight to the blow. The exhibit was of special interest as illustrating two stages of prehistoric culture in Spain with a gap between. 'Trunnions' was a happy term for the lateral projections on a type of celt that was made both of bronze and iron in the seventh century B. C. He referred to the rock-carving in Sweden of a figure holding a shield of the type in question, and thought Montelius cited it as evidence of British influence in Scandinavia.

Thanks were ordered to be returned for these communications and exhibitions.

THURSDAY, 27th MARCH 1919.

The Right Rev. Bishop GEORGE FORREST BROWNE,
D.D., D.C.L., Vice-President, in the Chair.

The following were admitted Fellows :

Vere Langford Oliver, Esq.

Paul Waterhouse, Esq.

E. A. RAWLENCE, Esq., read a paper on the site of the battle of Ethandun, which will be printed in *Archaeologia*.

The paper was an attempt on the part of the writer to determine from historical records, coupled with his local knowledge of the district, which of the two generally accepted sites, Eddington on the Polden Hills in Somerset, or Edington near Westbury, in Wilts., was the true site of King Alfred's great victory over Guthrum and the Danes. In the first section he pointed out the impracticability, and almost impossibility, of the campaign on the Poldens as suggested by its advocates. In the second section he attempted to prove from numerous local place-names and roads, which complied in a remarkable way with the requirements of historical records, the overwhelming evidence in favour of the Westbury site in Wilts. At the same time he showed what a wonderfully clever plan of campaign Alfred had devised to surprise the Danish army.

The CHAIRMAN said it always seemed clear that Alfred took the offensive against the Danes, the direction of his advance giving a clue to the site of the battle. During the millenary celebrations he had with others gone over the ground carefully, and Alfred evidently had no difficulty with ships or morasses. The march was a dry one and led him far away from Athelney. The balance was certainly in favour of the Wiltshire sites, but he himself was inclined against that near Chippenham. The other Edington was near the great enclosures, called Castles of the Danes, which came into the story. Any one interested in the campaign had perforce to trust a good deal to imagination and instinct, which combined against the Somerset site. Each time he visited the Uffington White Horse, he was more convinced that it was originally due to lines of exposure in the chalk caused by runlets of water down the slope: those lines represented the legs, and it only remained to add a body. Ethandune could not have been near the White Horse, or Alfred in his translation of Boethius would not have substituted Wayland's

bones for those of the great Fabricius in the philosopher's question. He expressed the thanks of the Society to Mr. Rawlence for the pains taken to solve the problem.

Mr. PAGE welcomed the mass of information brought together about the battle, which was one of the most important in the Anglo-Saxon period. It was significant that the author and Mr. W. H. Stevenson, in his note on Asser, had come to the same conclusion on independent grounds. One had been convinced by philological reasons, the other by topographical and military necessity.

Mr. RAWLENCE replied that there was a White Horse near Westbury, having at the present time the appearance of a highly bred animal; but it had been a very rustic creature till about 1847, when an architect named Gee cut out a figure to replace what had been obliterated.

Mr. RAWLENCE also exhibited three palaeolithic implements from Dunbridge, Hants, and a flint arrow-head found on Vimy Ridge.

Mr. DALE referred to similar specimens exhibited by himself from the same gravel-pit, on more than one occasion. The Dunbridge site was on the 150 ft. contour line, and the white implements came from the upper part of the gravel, about 6 ft. from the surface. They were quite unabraded, and must have been made on the spot. The patination had not yet been explained by geologists, and he pointed out that the implements were whiter than the surrounding bleached gravel.

Thanks were ordered to be returned for this communication and exhibition.

THURSDAY, 3rd APRIL 1919.

Sir ARTHUR JOHN EVANS, Knt., D.Litt., F.R.S.,
President, in the Chair.

Notice was given of the Anniversary Meeting to be held on Thursday, 1st May, at 2 p.m., and lists were read of the Fellows proposed as President, Council, and Officers for the ensuing year.

The Report of the Auditors of the Society's accounts for the year 1918 was read (see end of volume), and thanks were voted to the Auditors for their trouble and to the Treasurer for his good and faithful services.

JAMES BERRY, Esq., F.R.C.S., F.S.A., read the following paper on the Fortified Churches of Southern Transylvania :

The main object of this communication is to draw attention to the large series of fortified village churches which exist in Transylvania, chiefly in the southern and south-eastern parts of that country.

Owing probably to their remoteness and their inaccessibility, they appear to be less well known in this country than they deserve to be. Closely related to them are the peasant fortresses (Bauernburgen, Bürgerburgen), which are also very common in Transylvania. Both owe their origin to the same cause, namely, the liability of the districts in which they occur to sudden invasion by fierce and barbarous enemies, Kumans and Petchenegs in earlier days, Turks and Tatars in the later centuries.

Transylvania consists of an elevated plateau almost completely surrounded by a chain of mountains from 2,000 to 8,000 feet in height. On the southern side this mountainous wall is traversed by four important passes, the Vulcan, Red Tower, Törzburg, and Tömös. At the south-eastern angle is the Oituz pass. The districts on the Transylvanian side of these passes are those in which lie the fortified churches which I have visited, and which I propose to describe. They occur on both sides of the basin of the river Olt, and also of that of the Great Küküllő river farther north. The whole district forms a rough triangle with the towns of Nagy Szeben (Hermannstadt), Brassó (Kronstadt), and Segesvár (Schässburg) at the angles (see fig. 1¹).

About the middle of the twelfth century, in the reign of the Hungarian king Geisa II, numerous settlers from Western Germany were invited by him to occupy this march-land. In the first half of the thirteenth century the Teutonic knights were granted the district of the Burzenland in the neighbourhood of the later town of Brassó (Kronstadt), which was founded by them. These latter, however, about the year 1225, left the country and went to the shores of the Baltic, where they were instrumental in founding the state which eventually grew into the modern Prussia. South Transylvania has therefore, since the twelfth century, been inhabited by a population which is

¹ Figs. 1 and 2 have been reproduced, by permission of the Royal Geographical Society, from a paper by the author in the *Geographical Journal* for March 1919.

largely German. It was these early German settlers who built most of the fortified towns, villages, and churches with which this paper deals. The larger towns, such as Kronstadt and Hermannstadt, had of course their own fortifications, of which considerable remains still exist. The churches within them were sufficiently protected. But the villages in the open country were as a rule not surrounded by walls. Their inhabitants, in

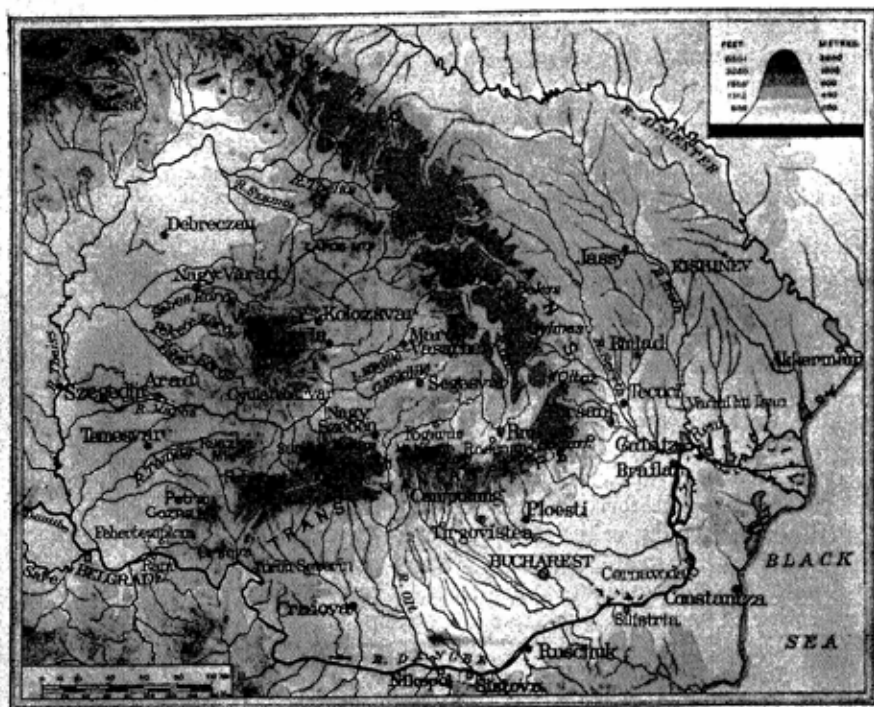


Fig. 1. OROGRAPHICAL SKETCH-MAP OF TRANSYLVANIA AND SURROUNDING COUNTRY.

times of danger, either retreated within a strongly-fortified enclosure immediately surrounding the village church, or retired to a fortress on some neighbouring hill-top.

The remains of both kinds of fortification are extremely common in Transylvania, but it is only a small proportion of them that I have been able to visit, and a still smaller number that I have had the opportunity of photographing.¹ Most of them date from the fifteenth and sixteenth centuries, while some

¹ The actual photographs have all been taken by my wife, who has visited these churches with me.

are said to be of the fourteenth, and others are known to have been built as late as the seventeenth century. Many of course have been completely destroyed, especially those on main lines of communication, but many are still in a good state of preservation. It is in the remoter districts, and especially in secluded valleys far from railways and main high-roads, that the best examples are to be found at the present day. The church is generally situated on rising ground, and often in the centre of the village.

The villages of Nagy Ajto and Bölön, both near the river Olt nine miles north of Brassó, show the simplest form of fortification. In both a stout wall, some 25 ft. to 30 ft. in height and loopholed at its upper part, completely surrounds the church. At Nagy Ajto the enclosed space is quadrangular, at Bölön it is oval. On the inner side some feet from the top is a ledge of masonry to which was attached a wooden platform on which the defenders stood. At Bölön some traces of the original wooden platform were still in existence at the time of our visit (in 1896). At both places square turrets project from the outer face of the wall, and in one of these at Nagy Ajto is the only entrance to the enclosure. The doorways in the two sides of the tower are narrow and easily defended. At Bölön the original entrance has been widened and fitted with a modern iron gate. At Nagy Ajto the large space between the church and the enclosing wall is chiefly occupied by wooden sheds in which the villagers still keep their corn and other agricultural produce. At Bölön it is quite bare. Interments are made outside the enclosure. At Bölön the original church has been replaced by a new one built in 1895, but the enclosing wall is said to date from 1617. The church at Nagy Ajto is said to date from 1300, and the enclosing walls from 1634.

Fig. 2 shows the fortifications of Keresténysziget (Grossau) church, a few miles to the west of Hermannstadt. Here the irregular enclosing wall still preserves several of the square towers on its outer side and also an octagonal tower on the inner side. The latter tower, although now capped by a comparatively modern roof, still shows the stone corbels which originally supported a defensive parapet. The interior of the enclosure contains the remains of buildings abutting on the wall. This church was built in 1498, but the enclosing wall and some of the towers suggest an earlier date. This church is known to have been besieged on several occasions. In 1658 it was attacked and taken by the Turks, who massacred the defenders. The women and children took refuge in one of the towers, but the besiegers set fire to this and all within are said to have perished.

The similar church of Kerestényfalva (Neustadt) near Brassó still retains nine of its towers in the surrounding wall (fig. 3).

The fine Gothic church of Berethalom (Birthelm), situated in a side valley south-east of Medgyes in the valley of the Great Küküllő, is on an eminence in the middle of the village. It is surrounded by two encircling walls. A curious entrance passage



Fig. 2. THE FORTIFIED CHURCH AT KERESTÉNYSZIGET (GROSSAU), SOUTH TRANSYLVANIA.

winds round for a long distance between the two walls until the entrance tower is reached. Here a portcullis guards the entrance through the inner wall. Numerous short arches extend across the passage between the two walls (see fig. 4). These are probably for the purpose of strengthening the walls against earthquakes. This church, with its double walls, high red-roofed towers, and curious entrance passage, is one of the best examples of a Transylvanian fortified church that I have seen.

The neighbouring church of Medgyes is also a very fine one, in a commanding situation within a double line of walls with

towers at the angles, but it was so much surrounded by houses that it was impossible to get a good photograph of it.

At Nagy Disznod (Heltau) the church, with a massive square tower, also stands on an eminence. It is surrounded by no less than three concentric walls, of which large portions still exist in good condition. The entrance passage, still in a good state of preservation, is the most remarkable that I have come across. A narrow entrance (now blocked) led into a square tower in the front wall of which a modern entrance has been cut. From this tower a second gateway leads through the midmost of the three walls into an oblique covered passage some twenty-five



Fig. 3. CHURCH AT KERESTÉNYFALVA (NEUSTADT), SHOWING REMAINS OF RING OF FORTIFIED TOWERS IN ENCIROLING WALL.

feet long leading to the innermost wall, where there is another entrance into a second square tower. On both sides of the passage are numerous loopholes through which the defenders could shoot at any one attempting to pass. This complicated defensive passage still affords the only entrance to the church enclosure. The outer wall is also remarkable in that it still preserves part of its original covered gallery for the defenders. The floor of this gallery is supported upon large, slightly pointed arches of masonry. When my wife and I visited the church in 1910 we were told that the inhabitants, finding the entrance to their church somewhat inconvenient, had petitioned the pastor that it might be done away with. But the latter, greatly to his credit, told the petitioners that they ought to be proud of

having such a remarkable entrance to their church, and refused to grant their request.

Many of the towers which surround the churches and of the church-towers themselves have lost their original roofs, and are either devoid of roof or are covered by modern tile roofs which show no trace of fortification.

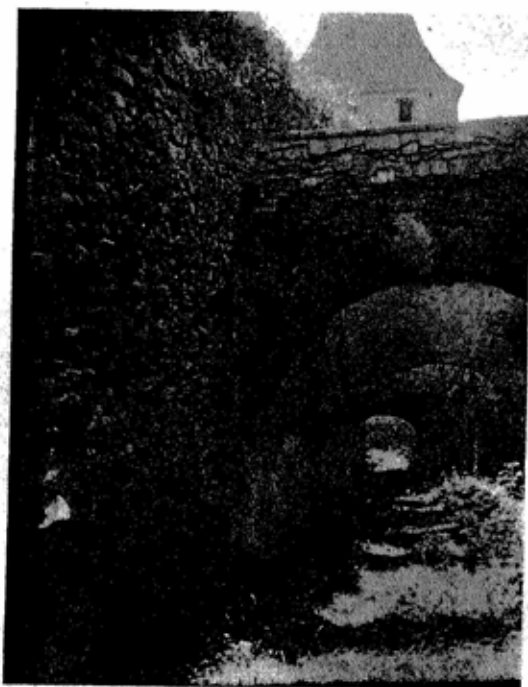


Fig. 4. ORIGINAL ENTRANCE PASSAGE TO THE FORTIFIED CHURCH OF BERETHALOM (BIRTHELM).

I turn now to churches whose towers still show the method of fortifying the upper parts of them. At Trappold, a village picturesquely situated among the hills many miles south of Segesvár, may be seen a massive square church-tower with encircling wall towers. All the towers are capped with four-sided pyramidal roofs, immediately beneath which is a projecting wooden gallery open on all four sides, so that the defenders could fire from it in all directions.

This church affords also a good example of the large chamber often found between the nave roof and the high-pitched external

roof. This chamber, which is reached by a narrow staircase, has loopholes on both sides, and is capable of containing a large body of defenders.

The little church at Kis Kapus (Klein Köpisch) in the Küküllő valley (fig. 5) ought perhaps scarcely to be classed among the fortified churches, since the fortified surrounding walls, if they ever existed, have now entirely disappeared and are replaced by a modern wall and gateway bearing the date 1885. But the church itself possesses the usual pyramidal roof or stumpy spire, which has an open projecting gallery similar

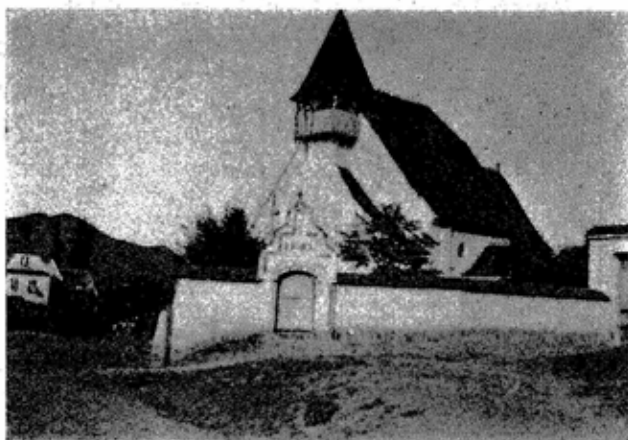


Fig. 5. CHURCH AT KIS KAPUS (KLEIN KÖPISCH), SHOWING OPEN PROJECTING GALLERY OF TOWER, NOW PARTIALLY ENGAGED IN NAVE ROOF.

to those seen at Trappold. It will be noticed, from the curious way in which the wooden gallery has become engaged in the high-pitched roof, that the latter is a more modern addition. Not many miles to the south of this church is an exceedingly fine example of a fortified church at Baromlaka (Burmloch). There are two massive square towers, one at each end of the church. The western one has a boldly-projecting stone parapet open on three sides, and surmounted by a four-sided roof. Half-way up this roof and running all round it is a narrow horizontal slit through which additional defenders were able to fire. The eastern tower has an open wooden projecting gallery with a pyramidal roof similar to that of Trappold. But half-way up this tower on the east and north sides is a heavy stone platform supported by huge rounded arches carried on massive square buttresses. Both of these are

protected by small separate roofs projecting obliquely from the sides of the main tower.

A notice on a side tower says that this was built in 1591, but the church itself appears to be of a much earlier date. The north door of the church with a pointed arch and mouldings that suggest a fourteenth-century date still preserves its oak

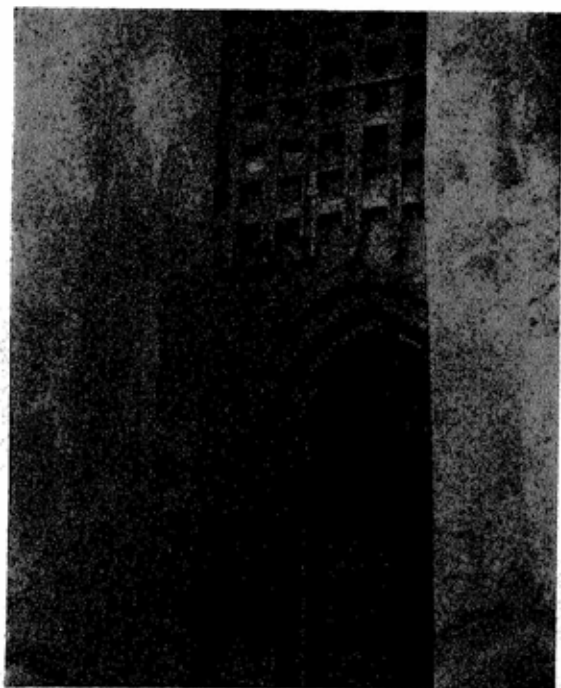


Fig. 6. WOODEN PORTCULLIS IN SITU OVER NORTH DOOR OF BAROMLAKA (BURMLOCH) CHURCH.

portcullis fixed *in situ* above the doorway (fig. 6). It is a matter of much regret to me that I had not time at my disposal to examine more fully this most interesting church, which would well repay a more detailed and careful study.

Fig. 7 shows the unfortified church of Kaineni, in the Olt valley but on the Rumanian side of the Carpathians. With its deep porch, shallow arcading, and external frescoes, it is an excellent example of a remarkable group of village churches which form a striking contrast to the simple fortified churches of Transylvania.

In comparing these fortified churches of Transylvania with those of Western Europe, such as may be seen at Albi, Les Saintes Maries, Royat, and elsewhere in the south of France, it will be seen that the chief interest lies mainly in the encircling walls, entrances, and towers, rather than in the churches themselves. In Western Europe such complicated external defences, so far as I am aware, are rarely, if ever, to be seen, and the defenders relied more upon the fortifications of the church itself. Thus at Les Saintes Maries near the mouth of the Rhone, built



Fig. 7. UNFORTIFIED CHURCH OF KAINENI, ON RUMANIAN SIDE OF CARPATHIANS, FOR COMPARISON WITH FORTIFIED CHURCHES ON TRANSYLVANIAN SIDE.

1444-9 for defence against Saracen raiders, the church has no surrounding defences, but is itself much more like a fortress than a church. This building has a flat roof which is surrounded by a low stone crenellated parapet supported on enormous external buttresses. The windows are small, and far from the ground. This is the only church that I have seen which has a well in the centre of the nave.

The cathedral at Albi (départ. Tarn) is a magnificent specimen of a fortified church also without surrounding fortifications. A huge, massive, keep-like west tower, of which the three lower stories date from 1365, has no external doorway, and the few windows are mere narrow slits in the wall. The roof is nearly flat, and has a low parapet running all round it. The windows of the nave, which have, I believe, been enlarged since the church was originally built, are still high above the ground. The south porch is a fifteenth-century addition.

A second point which is characteristic of the Transylvanian fortifications is the rudeness of the masonry of the enclosing walls (see fig. 4). There is but little ornament and the masonry is usually rough. The builders were for the most part simple burghers or peasants, and their main object was defence, not ornamentation. The simple and rude character of the masonry makes it difficult to assign a date to many of these walls.

A third point of interest lies in the preservation in so many cases of the wooden structures forming the projecting external galleries of the towers (see fig. 5). Most fortified buildings of Western Europe show no trace of their wooden superstructures. Even fortified town walls have but rarely preserved the roof that formerly covered and protected the defenders of it. Of those that I have seen I can recall only Rothenburg in Germany and Morat in Switzerland, as still preserving the roof to the fortified wall, as does the church wall of Heltau.

The only fortified church in England with which I am personally acquainted is that of Bedale, Yorkshire, the tower of which was built partly for defence at a time (early fourteenth century) when Scotch border raids were a source of danger. A narrow staircase defended by an iron portcullis led up to the first story, which was fitted with a fireplace and a garderobe. There are doubtless many other fortified churches to be found on the borders between England, Scotland, and Wales.

Mr. George Halliday, F.S.A., of Llandaff has been good enough to call my attention to the interesting fortified church of Newton Nottage on the coast of South Wales, between Cardiff and Swansea. Here the massive western tower still retains stone corbels projecting two feet from its east wall, which served for the support of a wooden platform intended for defensive purposes, together with a doorway or opening in the tower wall which led to the platform. This church is the subject of an interesting illustrated paper by Mr. Halliday in *Archaeol. Cambrensis* for April 1904.

Sir THOMAS JACKSON had listened to the paper with pleasure and interest. A fortified church he had seen at Moissac (Tarn-et-Garonne) had not been mentioned. It had no aisles, but a choir within the nave enclosed by a screen; at the west end was a large tower to which in the twelfth century was added a magnificent portal, and at the same time a parapet walk was constructed all round for fortification. Of a later date was a curious fortified church in the island of Lesina in the Adriatic: it had three apses which were in reality bastions. They contained embrasures for cannon, and a flue to carry off the smoke, the purpose being to defend the building against pirates and

the Turks. There were small fortified church-towers against the Welsh in Pembrokeshire, vaulted on the lower story and lined above with pigeon-holes, the birds and eggs being used for food during a siege. Among the Serbian churches one at Manassia, built by one of the later despots, had a ring of towers and a curtain wall surrounding it, in a manner recalling those of Transylvania. He had been particularly struck by one of the later churches shown on the screen, with Turkish details in the arches. The church at Royat, near Clermont-Ferrand, looked like a castle, having machicolations and a bailey with a well in the enclosure.

Mr. PRIOLEAU WARREN said there were several fortified churches in Spain, that at Avila for instance having an apse that served as a bastion of the wall. He was familiar with Albi church, which was rather a strong observation post, and had sentry-boxes at the back of the buttresses. There were innumerable cases in which the church was the centre of a fortified area, as Mont Saint Michel, and also Mount St. Michael in Cornwall. He had never seen Rumanian churches of that description illustrated, and thought the crude and picturesque church shown on the last slide was purely Serbian.

Mr. GARRAWAY RICE read a letter received from Mr. Towry Whyte on fortified churches in England. He knew of three in Cumberland. The farthest down the Solway was Newton Arlosh, dated about 1309, the bishop of Carlisle having granted a licence to the abbot of Holm Cultram to build a church at Arlosh. The total length was nearly 53 ft., of which the tower occupied about 20½ ft. The old windows were more than 7 ft. from the ground and very small, the door low and only 2½ ft. wide. The ruin had been restored and altered in the last few years.

The second was at Burgh-on-Sands, with the older windows small and about 8 ft. from the ground. The tower and lower walls were between 7 ft. and 8 ft. thick, the bottom floor being vaulted and loopholed for archers. It was entered from the church by a door only 2 ft. 8 in. wide, guarded by a yett, so that if the wooden door was burnt, the iron gate would remain. The architecture was early English, with some late Norman work.

The other church was Great Salkeld, about six miles from Penrith. The structure was Norman with a later tower, and the fine Norman doorway on the south was 2 ft. 7 in. wide. Both the ground-floor and basement of the tower were vaulted,

and there was an iron door as at Burgh. Mr. Rice preferred to call such buildings border-forts rather than fortified churches.

The SECRETARY said it was of interest to see how the ordinary systems of defence could be applied to churches. Except on the borders, there had been in England no necessity to build fortress-churches after a remote period. A good example was St. Peter's, Medehamstede, round which Abbot Kenulf built a wall between 992 and 1005, thereby changing its name to Peterborough. There still survived a motte which Abbot Thorold cast up to overawe his Saxon monks. Another instance was Rochester, where there existed parts of a massive tower built by Gundulph in the eleventh century: it was one of many strong towers attached to churches for refuge in case of attack, as at St. Leonard's, West Malling; and the round-towers of Ireland were said to have served the same purpose. Bell-towers were also strong places, but the English system of fortification did not include the whole church. A late instance in the north was the ruined church of Lindisfarne Priory, which dated from the twelfth century, and had its parapets raised and carried all round the church in the fifteenth as a defence against the Scots.

The PRESIDENT had seen many of the Transylvanian fortified churches when walking through the country, and remembered comparing them at the time with the Kremlin. Transylvania was only part of a system extending over a large part of Russia. Such defences would fail against western methods of warfare, but served as protection against sudden raids by mounted enemies; and Transylvania was a great buttress against the surrounding area of nomads. Mount Athos was a group of fortified monasteries, the churches of which were Slav-Byzantine, perhaps originally in Serbian hands. The contrast between German and Byzantine influences was very marked north and south of the Carpathians.

Mr. BERRY expressed his gratification that his first communication to the Society had been so well received. The fortified churches of Transylvania were not wholly German, and it was recognized that cavalry could make little impression on fortresses.

Thanks were ordered to be returned for this communication.

THURSDAY, 10th APRIL 1919.

Sir ARTHUR JOHN EVANS, Knt., D.Litt., F.R.S.,
President, in the Chair.

A special vote of thanks was passed to E. A. Webb, Esq., F.S.A., for his gift of *The History of St. Bartholomew's Hospital*, by Norman Moore, M.D.

Harold Hulme Brindley, Esq., M.A., was admitted a Fellow.

Notice was again given of the Anniversary Meeting to be held on Thursday, 1st May, at 2 p.m., and lists were read of the Fellows proposed as President, Council, and Officers for the ensuing year.

E. THURLOW LEEDS, Esq., M.A., F.S.A., read a paper on the Megalithic Tombs of Spain and Portugal.

The ever-recurrent interest displayed in the question of the origin or distribution of burial in megalithic tombs seemed to call for a more up-to-date survey of the material at present available from the Iberian peninsula, more particularly in view of the prominent geographical position of those countries in the European megalithic chain. Such a survey showed: (1) that among the megalithic tombs in Spain and Portugal three, if not more, distinct types or stages could be recognized; (2) that the distribution of these types or stages seemed to coincide with well defined areas; (3) that an examination of the contents of the tombs, so far as such were available for study, pointed in the one direction to a gradual advance from a neolithic to a chalcolithic culture, in the other to the possibility of a backward state of civilization in certain parts of the peninsula; (4) that the part played by the Iberian peninsula during the spread of megalithic culture in Europe was much more obscure than was ordinarily supposed, and that the usually accepted theories or conclusions on this point hardly fitted in with the picture presented by the facts so far known.

Professor GADOW welcomed any fresh light on the curious distribution of dolmens, a subject he had studied twenty years ago, and noticed a similarity of type in Spain and North Wales.

Mr. REGINALD SMITH inquired whether the proposed definition covered such cases as chambers with a large capstone resting on a corbelled roof; it was also difficult to draw the line between

dolmens and passage-graves, as the porch merged into the passage. He was interested to see the jew's-harp plan occurring in Spain, and to find two different groups of monuments, near the south coast of Spain and in Portugal respectively, in the presumed track of the early navigators who spread the dolmen idea. There was much archaeology in the arrow-head, and the swallow-tail type was unexpected in megalithic times, being more akin to the Bronze Age series in Britain than to the lozenges and pointed ovals of the passage-graves. The ceremonial adze, of which more than one example had been found in Portugal, was said to be one of many forms adopted in the cult of the axe. The occurrence of metal in Spanish dolmens was admitted, but was open to two interpretations. Those in favour of the spread of metals and other marks of civilization from the south might argue that the dolmen-builders of the peninsula were in advance of the neolithic north; others who insisted on priority for the north might retort that dolmens were being built on both sides of the North Sea centuries before the end of the Neolithic, whereas in the south-west their introduction was delayed till the age of metal. There might be an easy way out of the dilemma, but the rival claims of north and south with regard to neolithic civilization were by no means settled.

The PRESIDENT was interested to have the distribution of megaliths in the peninsula so fully investigated, even if the author was reticent as to possible conclusions. Dolmens were recognized from Scandinavia along the coasts of the North Sea and the Atlantic to the Mediterranean, but more evidence was required as to their existence and distribution along the north African coast. Some of great size and remote antiquity were already known, but details were insufficient to establish a sequence. He had himself seen megalithic monuments in the Constantine district of Algeria, and noticed that arrow-heads of Spanish type were found right across the Sahara to the Niger, showing that the present caravan routes dated back to neolithic times. Bracelets or anklets beautifully worked in flint were also distributed across Libya to Egypt, and served to connect Nilotic civilization with that of neolithic Spain. He could not follow Professor Montelius in connecting the Spanish megaliths with the pyramids; and argued that the spread of that civilization was rather from north to south. He distinguished between the earliest beehive tombs in Crete and those discovered by Schliemann, which were much later.

Mr. LEEDS replied that dolmens did not occur in south or south-east Spain, and with one exception there were no megalithic

monuments in the east or centre of the country. They were confined to the north and part of the south, apart from Portugal. By definition dolmens should have a single capstone, and must be above ground, or at least not entirely covered with a mound. The spread of the dolmen idea was quite distinct from the distribution of objects contained in those structures: beakers, for instance, pointed to Italy and the middle Rhine, and ostrich-eggs could be traced to Africa. He also demurred to comparing the Spanish and Portuguese megaliths with the beehive tombs of Greece. There was a considerable difference in date, the chamber of Atreus being about 1500 B.C. and the megalithic tombs between 2000 and 2500 B.C.

Thanks were ordered to be returned for this communication.

ANNIVERSARY.

THURSDAY, 1st MAY 1919.

Sir ARTHUR JOHN EVANS, Knt., D.Litt., F.R.S.,
President, in the Chair.

Harold Sands, Esq., and William Martin, Esq., LL.D., were appointed Scrutators of the Ballot.

The following Report of the Council for the year 1918-19 was read :

In presenting this Report to the Fellows, the Council is glad to state that the long continuance of the War has not had so serious an effect on the Society's membership or finances as was at one time anticipated. With regard to Finance the Treasurer's statement (see Report of Auditors) will give all the information needed. With regard to membership the numbers of the Society are not seriously diminished, and although it has been found necessary to curtail our normal work both in the matter of excavation and of publication, it seems probable that the present season may see a resumption, in part at least, of both these branches of the Society's activities.

Losses during the past year have been fewer than usual, the following Fellows having died since the last Anniversary :

Percy Willoughby Ames. 11th February. 1919. (Elected 7th June 1894.)

- Sir George John Armytage, Bt. 8th November 1918. (Elected 11th February 1869.)
- Henry De Vere, Lord Barnard. 28th December 1918. (Elected 7th June 1917.)
- Alfred Ridley Bax. 4th June 1918. (Elected 18th April 1893.)
- Samuel Joseph Chadwick. 20th November 1918. (Elected 3rd March 1887.)
- John William Clay. 2nd October 1918. (Elected 1st March 1888.)
- Reginald Charles Edward, Lord Colchester. 26th February 1919. (Elected 25th November 1875.)
- John Charles Cox, LL.D. 23rd February 1919. (Elected 3rd March 1887.)
- Wilson Crewdson, M.A. 28th May 1918. (Elected 6th March 1902.)
- Lt.-Col. Henry Leslie Ellis. 12th April 1918. (Elected 6th June 1901.)
- *Edwin Freshfield, LL.D. 5th September 1918. (Elected 10th February 1870.)
- *Rt. Hon. Sir Edward Fry, G.C.B., F.R.S. 19th October 1918. (Elected 1st May 1884.)
- *Sir Alfred Scott Scott-Gatty, K.C.V.O., Garter. 18th December 1918. (Elected 10th January 1884.)
- Frederick Du Cane Godman, D.C.L., F.R.S. 19th February 1919. (Elected 4th June 1896.)
- Rev. George William Walter Minns, LL.B. 15th February 1919. (Elected 3rd March 1892.)
- Henry Owen, D.C.L., J.P., D.L. 14th April 1919. (Elected 4th June 1891.)
- *Edward Cookworthy Robins. 10th June 1918. (Elected 6th June 1878.)
- Edward Stone. 27th November 1918. (Elected 5th March 1903.)
- Canon George Frederick Terry. 7th February 1919. (Elected 13th January 1898.)

The following have been elected :

Charles Henry Hunter Blair.
 Harold Hulme Brindley, M.A.
 Frederick Chamberlin, LL.B.
 Frank Halliday Cheetham.
 Louis Colville Gray Clarke.
 Rev. Charles Robert Stebbing Elvin, M.A.
 George Eumorfopoulos.
 Arthur Finn.

* Denotes Compounder.

Canon John Fisher, B.D.
Charles Frederick William Goss.
Charles John Holmes.
Howard Coppuck Levis, LL.B.
John Edward Lloyd, M.A.
James Donald Milner.
Vere Langford Oliver.
Samuel Perkins Pick.
Geoffrey Reynolds Yonge Radcliffe, M.A.
Robert Forsyth Scott, M.A., LL.D.
Richard Hensleigh Walter, M.B., C.M.
Paul Waterhouse.
Frank Weston.

The following have resigned :

Walter Llewellyn Nash.
Sir James Sawyer, M.D. (died 27th January 1919).
John Venn, Sc.D., F.R.S.

MR. PERCY WILLOUGHBY AMES was elected a Fellow on 7th June 1894. He was a fairly regular attendant at the Society's meetings, but does not appear to have made any contributions to its Proceedings. His chief interests lay with the Royal Society of Literature, of which he was Secretary for a great number of years, a position which he resigned only a year or two before his death. He joined that Society at a time when its fortunes were at a somewhat low ebb, and it may be said with justice that its present prominent position in the world of letters is largely due to the energy and care he put into its affairs. He was an honorary LL.D. of Wilberforce University. He was born at Kirkstall near Leeds in 1853.

SIR GEORGE JOHN ARMYTAGE, 6th Baronet, was born in 1842 and elected a Fellow of the Society in 1869. He was a frequent attendant at the meetings and reader in the Library, and in 1906 he read a paper on the excavations which he had carried out at his home, Kirkstall Priory, formerly a Cistercian house, in which excavations he was assisted by Mr. John Bilson. He was an active member of the Yorkshire Archaeological Society, and was one of the founders and Chairman of the Council of the Harleian Society, for which he edited several volumes, amongst others the *Visitation of London in 1565*, *Canterbury Marriage Licences*, and the *Registers of St. George's Chapel, Mayfair*.

Outside archaeology he led an active public life, especially in his native Yorkshire, of which county he was High Sheriff in 1907-8, and Deputy Lieutenant. He was Chairman of the

Lancashire and Yorkshire Railway Co., and a Director of the Goole Steam Shipping Co. He was also a member of the York House of Laymen. He died at Kirklees Park on November 8th at the age of 76.

HENRY DE VERE, 9th BARON BARNARD, was only elected a Fellow of the Society in June 1917, but he was well known to the Fellows as the owner of the site of Viroconium (Wroxeter), in the excavation of which he took a very great interest. He had long hoped that the work might be undertaken under the auspices of the Society, and it was a source of great gratification to him that this was able to be begun in 1912. He had large property in Shropshire, and was President of the local Archaeological Society. He was an Hon. D.C.L. of Durham University, and had been Provincial Grand Master of the Durham Freemasons since 1900. He was born in 1854.

Like Sir George Armytage, Mr. SAMUEL JOSEPH CHADWICK was an active member of the Yorkshire Archaeological Society, of which he was a Vice-President. He also acted for many years as Secretary of the Records Branch of that Society, for a time in conjunction with the late Mr. J. W. Clay. His interests lay especially in the sphere of genealogy, and he did much good work in transcribing and editing the parish registers of his native county. Amongst his works were the *Parish Registers of Dewsbury*, a handbook to Dewsbury and its neighbourhood, and an account of Kirklees Priory.

The Yorkshire Archaeological Society has suffered another serious loss in the death of Mr. JOHN WILLIAM CLAY. Like Mr. Chadwick he was especially interested in parish registers and genealogy, and had published the *Registers of Elland in Yorkshire*. He edited the *Familiae Minorum Gentium* for the Harleian Society. At the time of his death he had just completed the publication of a new edition of Dugdale's *Visitation of Yorkshire*. Apart from this edition of Dugdale, which was probably his most important book, he did most valuable work for the Records Branch of the Yorkshire Archaeological Society, of which he had been Secretary since 1897. For this he edited ten volumes, including *Abstracts of Wills*, *Royalist Composition Papers*, *Yorkshire Church Notes*, and *Yorkshire Monasteries Suppression Papers*. He had been a Vice-President of the Yorkshire Archaeological Society, and of the Surtees Society, and a member of Council of the Harleian and Yorkshire Parish Register Societies. He died on October 2nd at the age of 80.

REGINALD CHARLES EDWARD, 3rd BARON COLCHESTER, was born in 1842, and educated at Eton and Oxford, where he had a distinguished academical career. His interests lay particularly in the sphere of politics and education, and he was a member of the old London School Board for many years. He appears to have taken no part in the activities of the Society.

The death of Dr. JOHN CHARLES COX has removed a figure well known to the Fellows of the Society and in the antiquarian world generally. He was a prolific writer on archaeological subjects, and probably his most important works were those on the *Churches of Derbyshire* and on the *Chronicles of the Collegiate Church of All Saints, Derby*, the latter in collaboration with Sir William Hope. He was a contributor to the *Victoria County History*, edited the *Borough Records of Northampton*, while his *How to write the History of a Parish* was well known and had gone into more than one edition. He was also editor of the 'Antiquary's Books' and of the 'Little Guides', to both of which series he contributed numerous volumes. He made several contributions to the Society's Proceedings and was a constant reader in the Library, although of late years he had been unable to attend the meetings. He was also a member of the Royal Archaeological Institute, of the British Archaeological Association, of the Canterbury and York Society, and of the British Numismatic Society, the transactions of most of which give further proof of his manifold activities.

MR. WILSON CREWDSON, who died on 28th May, was elected a Fellow in 1902. He was a man of varied activities and a collector of considerable judgement. He frequently exhibited objects before the Society, amongst them several alabaster tables and seal matrices, of the latter of which he presented at least one to the Society's collection, the silver seventeenth-century matrix of the town of Emden. Amongst his other exhibits was a latten crozier head of the twelfth century found at Allingham, Kent, which he subsequently had mounted on a staff and presented to the Bishop of Rochester.

Dr. EDWIN FRESHFIELD, who was elected a Fellow of the Society in 1870, was educated at Winchester and Trinity College, Cambridge. In his time he took a very active part in the affairs of the Society. He served as Auditor on several occasions, had been a Vice-President, and the Trustee of the Soane Museum nominated by the Society. In February 1889, on the death of Mr. Charles Spencer Perceval, he was elected Treasurer, an office which he held until his resignation in 1897.

During these eight years he succeeded in placing the finances of the Society on a sound basis, which, to quote a resolution of regret passed on his resignation, 'exceeded the most sanguine expectations'. A solicitor by profession, he was head of the firm of Freshfields, solicitors to the Bank of England, and was ever ready to advise the Society on any matters on which a legal opinion was necessary.

His archaeological interests chiefly centred in the City of London and in the Near East, his tastes turning especially in the direction of Byzantine antiquities. On these subjects he made many communications to the Society, his last being in April 1916, when he read a paper on three Greek crosses, one from the Parthenon and two from the ruins of Elefsis, which were illustrated by that wealth of lantern slides which were always a characteristic of his communications.

He was the first President of the Byzantine Research and Publication Fund and also a member of the Hellenic Society. He was also for many years President of the London and Middlesex Archaeological Society. He published many papers on the subject of the City churches, and as churchwarden of St. Margaret's, Lothbury, he had a good deal to do with the fitting up of that church, partly with spoils from destroyed City churches; the screen in the church was, as is well known, originally in All Hallows, Upper Thames Street. In this connexion it is noteworthy that he took an active part in opposing the frequent proposals for destroying City churches, and if these efforts were often unsuccessful, it is satisfactory to know that it was in many cases owing to his instrumentality that the fittings from the destroyed churches were preserved. He was also an active member of the Order of St. John of Jerusalem.

As an old Wykhamist he always took a great interest in the school, and gave generously towards the restoration fund for the chapel. But his most interesting benefaction was probably a unique one. The brasses in the College Chapel were stolen some time in the middle of the last century, but rubbings of them were fortunately preserved. From these rubbings Dr. Freshfield had replicas of the brasses made, and these were relaid in their original indents in the College Chapel.

The activities of the Right Honourable Sir EDWARD FRY, G.C.B., lay for the most part outside the sphere of the Society. A distinguished lawyer, he was appointed an additional Equity Judge in 1877, and promoted to a Lord Justiceship of Appeal in 1883, from which position he retired in 1892. After that date he was employed on various Royal Commissions as an arbitrator. He was a permanent member of the Hague Court

of Arbitration, and was selected as first British plenipotentiary to the second Hague Conference in 1907. He was an accomplished naturalist and a Fellow of the Royal and Linnean Societies. He also took an active part in the promotion of the Selden and other legal societies.

He served on the Council of the Society in 1886 and again in 1889, and was usually present at meetings when any subject dealing with primitive law or institutions was likely to come up for discussion.

SIR ALFRED SCOTT SCOTT-GATTY, K.C.V.O., Garter Principal King-of-Arms, was born in 1847, and educated at Marlborough and Christ's College, Cambridge. He entered the Heralds' College in 1880 as Rouge Dragon Pursuivant, became York Herald in 1886, and was acting Registrar from 1899 to 1904, when he was appointed Garter. In this office he was a prominent figure at many State functions, particularly at the funeral of King Edward, at the coronation of King George, and at the investiture of the Prince of Wales at Carnarvon. He was a Knight of Justice and Genealogist of the Order of St. John of Jerusalem.

A member of a talented family, his mother was the editor of *Aunt Judy's Magazine*, once to be found in most households, whilst his sister was Juliana Horatia Ewing, the well-known author of so many children's books. He himself was a musician of considerable merit, being the composer of a great number of songs, to many of which he also wrote the words. Probably the best known of these compositions were his Plantation Songs.

It was as a naturalist that Dr. FREDERICK DU CANE GODMAN was chiefly known. On this subject he was an acknowledged expert, his great contribution to the science being his *Biologia Centrali-Americana*, which he began to issue in 1879 and which was completed in 1915. The work consists of sixty-three quarto volumes, with over 1,600 plates, and contains the description of more than 19,000 species hitherto unknown to science. He was a Trustee of the British Museum, where his knowledge proved of great service to the natural history side of the collections. But that his interests could take a still wider aspect is shown by the fact that he had one of the finest collections of Persian and Oriental pottery and china in the country.

The Rev. GEORGE WILLIAM WALTER MINNS, LL.B., did not make many contributions to the Society's Proceedings, although shortly before his death he sent for exhibition the pyx from Godsfild in Hampshire, on which he communicated a short note.¹

¹ See above, p. 63.

He was, however, an active member of various local archaeological societies and for many years acted as editor to the Hampshire Field Club. It is interesting to note that he received his early training as a clergyman under Francis Procter, the author of the standard work on the Book of Common Prayer.

Dr. HENRY OWEN, whose death took place but a few days ago at the age of 75, was educated at Corpus Christi College, Oxford, of which University he was a D.C.L. He was elected a Fellow of this Society in 1891, had served on the Council, and was Local Secretary for South Wales and a member of the Finance Committee at the time of his death. Beyond reports as Local Secretary he does not appear to have made any communication to the Society, but he took a keen interest in its activities. He was especially alive to the necessity of preserving ancient monuments and founded an association in his native county, Pembrokeshire, for that object. This body, he reported in 1902, two years after its foundation, had 'stirred up the owners of old buildings from the County Council down to the Ecclesiastical Commissioners', and had 'restored twenty-four stones with Ogam inscriptions from gate-posts and other dangerous places to parish churches and churchyards'. He had in preparation a survey of the ancient remains of Pembrokeshire, and it is to be hoped that this valuable work was in a sufficiently advanced stage to ensure its publication. His other publications included *Gerald the Welshman*, *Old Pembroke Families*, and an edition of Owen's *History of Pembrokeshire*.

He was a member of the Historical Monuments Commission for Wales, of the Royal Commission on the Public Records, and Treasurer of the National Library of Wales. He was also Chairman of the Honourable Society of Cymmrodorion and of the Pembrokeshire Quarter Sessions, of which county he was J.P. and D.L. and had served the office of High Sheriff in 1902.

The Rev. GEORGE FREDERICK TERRY, canon of St. Mary's Cathedral, Edinburgh, was a keen antiquary, and had recently published a history of St. John's Church, Edinburgh, of which he was rector at the time of his death.

Sir JAMES SAWYER, who died shortly after his resignation of his Fellowship, was especially well known in Birmingham, where he had a large practice as a consultant. He had been senior physician of the Queen's Hospital in that city, and Professor of Pathology and subsequently of Medicine in Queen's College, afterwards the University. He was a keen politician and had been President of the Birmingham Conservative Association and Chairman of the Midland Union of Conservative Associations.

The TREASURER made a statement with regard to the financial position of the Society.

WILLIAM HENRY FOX, Esq., moved the following resolution :

That the Society's capital be adjusted in accordance with the present market values of the investments which appear in the Balance Sheet, which are mostly at the market valuation existing nearly twenty years ago.

ALFRED WILLIAM OKE, Esq., LL.M., seconded.

After discussion Mr. Fox, with the leave of the meeting, amended his resolution by the addition of the words 'at December 31st in each year' after the word 'adjusted'.

There voted for the resolution 11, against 26: the resolution was therefore lost.

W. H. Fox, Esq., moved the following resolution :

That it be a recommendation to Council that the surplus income be applied year by year for the advancement of the objects for which the Society was founded, instead of being capitalized and invested.

The resolution found no seconder.

W. H. Fox, Esq., moved the following resolution :

That the Treasurer be requested to repay to the Society the sum of £500, with interest at five per cent., being the amount improperly paid by him during the past ten years to one of the Fellows by way of salary.

WILLIAM PALEY BAILDON, Esq., seconded the resolution *pro forma*.

The resolution was rejected by a large majority, only one vote being recorded in its favour.

The Scrutators having handed in their report, the following were declared elected as Officers and Council for the ensuing year :

Eleven Members from the Old Council.

William Minet, Esq., M.A., *Treasurer*.

Sir Edward William Brabrook, Knt., C.B., *Director*.

Charles Reed Peers, Esq., M.A., *Secretary*.

Sir William Martin Conway, Knt., M.A., M.P.

Rev. George Herbert Engleheart, M.A.

Edward Hudson, Esq.

Sir Thomas Graham Jackson, Bt., M.A., R.A.
Edward Thurlow Leeds, Esq., M.A.
Willoughby Aston Littledale, Esq., M.A.
Lt.-Colonel George Babington Croft Lyons.
William Page, Esq.

Ten Members of the New Council.

Sir Charles Hercules Read, Knt., LL.D., *President*.
Sir Henry Farnham Burke, Knt., C.B., C.V.O., Garter.
Vernon Bryan Crowther-Beynon, Esq., M.A.
Rev. John Kestell Floyer, M.A.
John Emanuel Pritchard, Esq.
Gordon McNeil Rushforth, Esq., M.A.
Horace William Sandars, Esq.
Reginald Campbell Thompson, Esq., M.A.
William Harold Aymer Vallance, Esq., M.A.
Surgeon-Commander Alfred Ernest Weightman, O.B.E.,
R.N.

Thanks were voted to the Scrutators for their trouble.

The Meeting was then adjourned until 8.30 p.m., when the President proceeded to deliver the following address :

GENTLEMEN,

The term of my Presidency has coincided with the Great War. It has been for all of us a period of stress and preoccupation and has imposed on many of us duties very foreign to our own researches. In addition to this we have many of us had to encounter material difficulties as to our meetings—especially those at a distance—from reduced facilities of locomotion, want of accommodation and by reason of the encircling darkness. It has been no time for initiating new enterprises and all systematic work has been continually interrupted. But the Society may at least be congratulated on having been able to carry on, to hold its regular meetings, to hear and discuss many interesting communications, to continue its publications, and to maintain its financial position.

To-day we see the beginning of a new era. The Peace of which we have to wait the formal proclamation will in fact do something more, we may reasonably hope, than restore the former opportunities of antiquarian research. The success of our arms has been instrumental in opening out throughout the Near and Middle East new fields of archaeological investigation, and it is clearly the pre-eminent duty of our Society to make use of its influence and prestige in securing the advantages that

lie within our grasp. It has in fact, as you are aware, associated itself with the British Academy in the formation of a Committee specially devised to promote the interests of archaeological research in those regions. In this work both your retiring President and your President-elect have been able already to take an active part and to assist in drawing up recommendations which it is understood the British authorities will do their best to promote. Principles have in this way been suggested for the regulation and conservation of antiquities in Constantinople and the adjoining regions still technically under Turkish dominion but which are likely to be placed under the control of a Mandatory Power. The same applies to western Asia Minor and the future Armenian State. These matters have been taken up by a Commission entrusted with the task by the Paris Conference, and at the same time our own Committee has been in more direct communication with the British authorities regarding the antiquities of Mesopotamia and Palestine. It has indeed drawn up for the latter country a law on Antiquities more liberal in its provisions regarding scientific excavation than any of its predecessors, in Egypt or elsewhere.

As your President, I thought it moreover incumbent on me to take the lead in a public appeal to our Government, which I am glad to say was strongly backed by Field Marshal Lord Grenfell, to make an adequate grant towards the establishment of an Imperial British Institute in Egypt and to make an end of the scandalous indifference which our Administration has displayed towards the unique interests that might have been thought to have been especially in its charge. Both France and Germany have their Archaeological Institutes at Cairo. The United States, though from the nature of the case it has no centralized foundation of the kind, has a series of permanent Missions, with an inexhaustible financial backing. But we, the moral trustee of Egypt's inheritance, in spite of our dominant position, refuse all official aid. The existing British bodies for the furtherance of Egyptian researches—'The Egyptian Exploration Fund' and Professor Petrie's 'British School in Egypt', much as they have independently accomplished, are hampered at every turn by the want of means, and are at a great disadvantage as compared with the representatives of other nations. Even as it is, they largely subsist by means of American subscriptions, in return for which the principal discoveries that might have enriched our own museums to a great extent migrate across the Atlantic.

As I observed in my appeal, there is a general consensus of opinion to-day that whatever economies the Treasury may be bound to exercise in various directions, we cannot afford any longer to be parsimonious in what concerns education and learn-

ing. It is impossible to imagine any subject more intimately bound up with those great interests than the investigation of that ancient culture which stands at the very roots of our own civilization. But I regret to be obliged to state that the strong memorial on this subject presented to the Lords of the Treasury on behalf of the Joint Committee of which I have already spoken, representing besides the British Academy, our own, and all the other learned Societies, has shared the fate of all similar appeals and has been met by a blank refusal. The British Government continues on its old path, Philistine and material, and apparently devoid of a touch of the imagination needful to awaken it to the higher and more spiritual aspects of the trust that we hold in Egypt.

We have witnessed the same spirit in the treatment of national museums and galleries during the period of the Great War. The cutting off of its annual grant from the British Museum—to save three minutes, as it was calculated, of war-time expenditure!—and the consequent closing of the galleries deprived thousands of our kinsmen from overseas of profiting by the unique opportunity of inspecting our national treasures. But this was followed, early in last year, by a more direct and utterly reckless attack on what we may rightly call the citadel of learning in this country. The War Cabinet had in fact actually decided to assign the premises of the British Museum to the Air Board and to place it in the occupation of a combatant Department, with the result of making it a legitimate object for German bombs! Both as a Trustee of the British Museum and as President of your Society—which loyally backed my efforts—I did my best to protest against this decision, and the public outcry ultimately became so great that the Government felt themselves constrained to withdraw their decision.

But grave injury was nevertheless inflicted in other ways.

Though it was found impossible, in the face of the general condemnation of the proposal, to make the British Museum the head-quarters of a combatant Department, other Departments of a civilian character were installed within its walls and whole galleries dismantled and broken up—to the undoing of the work of generations—for their reception. A promise was given to the Trustees that two months after the conclusion of the War these intrusive bodies should be removed. But those solemn assurances have been treated as so many 'scraps of paper'! Not in the British Museum itself alone but in other public galleries, after six months' interval of peace we see whole sections still in bureaucratic occupation. Protests in Parliament, insistently put forward by our recently elected Fellow Lord Harcourt, have elicited no satisfactory assurance of a term being set on this

usurpation. As to the present condition of affairs I may relate an experience of my own, made only a few days since. Having urgent need for the purpose of Cretan researches to refer to certain objects in two different sections of the museum—some in the Early Greek and others in the Egyptian Department, I found the galleries in an almost unrecognizable condition, their cases empty and concealed by shelves laden with piles of business documents, while on each side of the central gangway were rows of improvised shanties, run up with match-boarding and resembling nothing so much as a street of some mushroom settlement in the Wild West!

I turn to a more agreeable subject. The recent presentation of Stonehenge to the nation is a subject of hearty congratulation. As your representative, in company with Sir Hercules Read, I took part in the official ceremony in the inner circle of Stonehenge itself and had the satisfaction of personally conveying your high sense of the liberal and patriotic action of the donor, Mr. C. H. E. Chubb. It is a further subject of congratulation that, thanks to the good offices of our Secretary, Mr. Peers, His Majesty's Office of Works have accepted the supervision and collaboration of our Society in the operations rendered necessary by the perilous position of some of the stones. I understand that Professor Gowland, who has already done such good work in this field, and Colonel Hawley, our veteran excavator at Old Sarum, have kindly undertaken to superintend the work.

In this connexion I may perhaps be allowed to repeat a caveat that I have entered more than once against received theories as to the purpose of Stonehenge. At the presentation ceremony, as usual, the speakers were full of the solar relations of the monument and even of its astronomical bearing. More than once I heard it described as a 'Temple of the Sun'.

It is an undoubted fact that, whatever we may think of the original purpose of the 'Friar's Heel', the deliberate and approximately accurate orientation of the monument strikes the eye. But if, as I believe, the evolution of the great Stone Circles may be traced back, through the smaller examples surrounding a central mound—which often reduplicates the ring stones that actually support the outline of the mound itself—and if again the central mounded chamber, afterwards reserved for the dead, is in its earlier stage but the circular habitation of primitive man, the orientation itself, however afterwards adapted to more celestial and religious ideas, must be regarded as an original feature of all such structures.

Any one acquainted with such mound dwellings, with their supporting stones, as they exist to-day in various Northern countries—I need only instance the Lapp 'Gamme' and Siberian

'Yurt'—will be well aware that the short entrance passage, which afterwards, by the same process of ceremonial reduplication as that affecting the ring stones, becomes the Avenue, is placed on the side where during the part of the year when the sun is visible, its first appearance is most easily perceived.

For my own part I shall continue to believe that the whole class of stone monuments to which Stonehenge belongs, grows out of a sepulchral cult. It seems to me, moreover, to be of primary significance that Stonehenge stands in relation to an extensive burial area, marked by barrows of more than one type, containing interments going back to an early period of the British Bronze Age. Stonehenge itself moreover presents a real analogy on a larger scale to the disc-shaped barrows, and it is a highly significant fact that Aubrey records the exhumation by Inigo Jones, near one of the Triliths, of a 'thuribulum' or incense vessel, typical of the surrounding Bronze Age interments. The discovery of coarse British pottery six feet down by the so-called 'Altar' also points to actual interment within the circle.

The orientation of Stonehenge is a fact. Its grand scale puts it out of the category of ordinary funereal monuments, and there is every reason to believe that it was associated with a higher cult. The bones of deer and oxen, moreover, dug up in the interior certainly point to sacrifice in such a connexion. But that cult, I maintain, should be rather sought in the direction of the Gods of the Underworld than of any solar divinity. The indications of interment within the sacred limits are certainly best reconcilable with that hypothesis as well as the fundamental relation in which Stonehenge and other great monuments of the kind unquestionably stand.

In this chthonic connexion, moreover, the legendary invocation of Merlin's magical agency by which the stones were transported to Salisbury Plain is not to be neglected. For Merlin, as has been shown by Professor Rhys, is only the later impersonation of the Celtic God Cernunnus, identified by the Romans with Dis Pater, the God of the Underworld.

We have here to deal not with an individual funereal monument but a monument of many, enshrining the worship of a tribe or people. It seems to have been set up gradually and may be taken also to include the commemoration of many individual chiefs of that bygone race. The stones themselves, according to the almost universal conception of those who set up the great circles and alignments—beliefs so vividly preserved by the more primitive races of India at the present day—are the actual abode of the spirits of the departed and, in a sense which it is difficult for us to realize, their visible impersonation. At a time when so many of us are preoccupied with the memorials of our

own dead on so many foreign fields this aspect of Stonehenge may be felt to have a solemn significance and the re-entrustment at such a moment to the guardianship of the nation of this great monument of remote predecessors must be recognized as singularly opportune.

The Great War has been a fiery ordeal and no monument that we can raise will ever repay our indebtedness to our own dead. But the best memorial that we can offer is not one that can be raised with hands. It is not of material kind. It has many aspects. But for a Society like ourselves which must necessarily regard the new era on which we are now entering from the intellectual point of view, it largely involves a new attitude towards the scientific side of our pursuits. Let me say it frankly, we have much to learn from our principal foe, from the discipline and methodical study, the admirable and wide-embracing organization of research, really cosmopolitan in its nature, which had been carried out by him to a degree such as the world has never seen before.

I have no illusions. I am well aware that all efforts in this direction have been clogged and impeded by the average mean of ignorance in this country. But the new Education Act contains at least the promise that the level of instruction with our own people may eventually be raised to that of other civilized nations, and that, *pari passu* with the growth of fresh centres of knowledge, that supreme incuriousness in intellectual matters, which it seems the special function of our existing Schools and leading Universities to breed, may be submerged by the rising tide.

The War has given no opportunity during the term of my own Presidency even to offer suggestions in matters of reform. Various improvements in procedure are indeed under serious consideration. But, as a parting exhortation, I can at least urge on all our members, as an earnest of a new and more scientific spirit, constantly to bear in mind the great scope which our own national history and traditions offer for an outlook which stretches far beyond the cliffs of Dover.

I am well aware that the division of labour necessary for modern archaeological research, the mapping out of separate provinces, and the concentration necessary for the proper treatment of special subjects, has done much to shear the Society of Antiquaries of many of its older functions. Egyptology, Assyriology, Classical Archaeology, Numismatics and certain Anthropological departments, have largely been withdrawn from our own sphere. We still claim, indeed—and rightly claim—to have no fixed boundaries in any of these directions, and are grateful to those who afford us occasional enlightenment on

subjects of which other Societies and Institutes have now become the more regular exponents. But, by the force of circumstances, the Society of Antiquaries has been more and more led to devote special attention to subjects like the earlier Pre-historic Archaeology and the Late Celtic Age in these islands, to Anglo-Saxon and Medieval lore, to records and topography. As a result of this there has been certainly at times a tendency to treat these subjects from the purely insular, or even the 'parochial' point of view.

I think we should all fully realize that such treatment by no means does justice to the questions involved and sinks below the standard which we, as a Society, true to its older cosmopolitan traditions, should seek to uphold. For Britain in truth is historically less of an island than some countries at least that form part of the continent of Europe.

Cast your eyes backwards for a moment. I hardly need ask you to recall the time when Britain itself formed part of the European mainland and the Thames flowed into the Rhine. But we have to remember that throughout not only historic but late prehistoric times wave after wave of invaders from overseas has, temporarily at least, practically annexed part of our island to the continent of Europe. To begin even with the Early Bronze Age, no one can adequately gauge discoveries in Britain without a fair knowledge of the similar finds between the Channel and the Alps. The earliest Iron Age remains show intimate points of contact with the Italo-Hallstatt province. Celtic invaders in fact carried the sword and shield of Central Europe over a large part of our island and even across St. George's Channel. When we come to what is still known here as the Late Celtic Age—a name more comprehensive than *La Tène*—we have irrefragable evidence—in this case supplied by the earliest coinage—that South Eastern England was for the time actually annexed to Belgic Gaul and its supreme Court in every sense was for a while rather at Soissons and Arras than at Verulam or Colchester. But these intimate connexions stretch much farther afield. As I once demonstrated to this Society, the Late Celtic urns such as we see them at Aylesford and elsewhere may almost be said to have been transferred bodily from the Venetian lands about the head of the Adriatic. The union begun by the Belgic Gauls was itself enlarged and consolidated by the Romans. The remains of Roman Britain have to be studied—and I am glad to see that this fact is appreciated by our explorers—with constant reference to the Roman provincial organization elsewhere and to the cultural monuments of the whole Roman world. The Saxon Conquest that follows, though it hardly established any political supremacy

from overseas, annexed this country from the point of view of language, arts, and institutions to the North German lands. At one moment, under Knut, we were actually forming a part of the Danish monarchy. In another direction, *pari passu* with this, the triumph of Roman Christianity had restored to a great extent the intellectual dominion of Rome. Next came the Norman Conquest, reimposing to a great extent a Continental civilization, which was supplemented in turn by the Angevin connexion.

In our archaeological studies we have in short to recognize the necessity of taking count at every turn of antecedent conditions extending far beyond our insular limits. It is that which makes the really adequate treatment of the remains of this country in many ways a more complicated matter than are those of France, let us say, to a Frenchman, or of Germany to a German. It has been said that Russians are such good linguists because their own language is so exceptionally difficult. In view of that analogy we may entertain great hopes for English archaeology!

The PRESIDENT then vacated the chair in favour of the Treasurer in the unavoidable absence of Sir Hercules Read, and exhibited his collection of ancient gems and seals, illustrating the exhibition with lantern slides.

Whereupon the following resolution was moved by WILLOUGHBY ASTON LITLEDALE, Esq., seconded by WILLIAM PALEY BAILDON, Esq., and carried unanimously :

‘That the best thanks of the meeting be accorded to Sir Arthur Evans for his address, and that he be requested to allow it to be printed.’

Sir Arthur Evans signified his assent.

Pursuant to the Statutes, Chapter III, section iii, the name of the following who had failed to pay all moneys due from him to the Society was read from the Chair, and the CHAIRMAN made an entry of amoval against his name in the Register of the Society :

James Goulton Constable, Esq.

A letter was read from Sir Hercules Read asking, in the event of the voting being in accordance with the recommendation of the Council and his succeeding to the presidency, that the Secretary would express his keen regret that doctor's orders forbade his being present at the meeting, and his deep sense of the honour that had been done him.

THURSDAY, 8th MAY 1919.

WILLIAM MINET, Esq., M.A., Treasurer, in the Chair.

The Chairman announced that the President had appointed the following Fellows to be Vice-Presidents of the Society :

William Page, Esq.

Lt.-Col. George Babington Croft Lyons.

Sir William Martin Conway, M.A., M.P.

Horace William Sandars, Esq.

RALPH GRIFFIN, Esq., F.S.A., read a paper on a Darell monument in Little Chart church, Kent.

The family of Darell of Calehill was founded by John Darell, a younger son of the Sessay family, who came into Kent and established himself at Calehill in Little Chart, which manor he bought about 1410. He advanced his fortune by marrying first the heiress of Valentine Barret of Preston by Faversham, and after her death a niece of Archbishop Chicheley, who settled Scotney on her. John Darell was steward to the archbishop, and, dying in 1438, was buried in the St. Catherine chancel at Little Chart, which, as also the tower of the church, was probably built by him. Of his son William, who succeeded at Calehill, little was known. He died in 1471 and was followed by a second John, who was attainted by Richard III, and was attached as squire of the body to Henry VII. He was knighted in 1497, and dying in 1509 was buried next his grandfather at Little Chart, where was an alabaster effigy of him. It was on a base which was probably not the original one, and an inscription to his memory had been placed on the wall over the effigy at a later date. It contained some inaccurate statements.¹

Major VICTOR FARQUHARSON, F.S.A., communicated the following notes on the helmets in Little Chart church :

Two helmets hang near the centre of the north wall in the Darell chapel. They are on iron perches, or brackets (as these are generally termed in the undertaker's accounts). Each bracket has a cross-piece, and also a hook. On the former would have been displayed the coat armour—generally of canvas, painted, in shape resembling a tabard. From the hooks would have hung the sword, spurs, and gauntlets which, together with the shield or targe, made up complete achievements. The helmets, as is usually the case, are now all that remain. Higher overhead

¹ Mr. Griffin's paper will be printed in full in *Archaeologia Cantiana*.

two sets of irons, with loops for poles, show where banners hung—these last have disappeared. The two helmets represent two



Fig. 1. THE DARELL HELMET : RIGHT SIDE.

of the distinct types into which church helmets can be divided. No. 1 is that shown in the illustrations. It is made up

entirely of real armour, and in fact represents the halves of two distinct headpieces. The front is that of a tilting heaume and the back portion is that of a large bascinet. No. 2 is of the class merely made for funeral purposes, and never was intended to be or could have been worn.

No. 1 is of considerable interest. The front is part of a very massive and finely-proportioned heaume, such as was used for tournament purposes from the middle of the fifteenth century to the end of Henry the Eighth's reign. It is of great weight; the upper part is very thick, especially where the edge is turned in at its prominent part in front of the slit for sight, and also lower down, parts where defence from the lance was most needed. Below, where there are two holes for screws by which the heaume was fastened to the breastplate, it is slightly thinner, and here it has been cut off on the left side, leaving only one screw-hole visible; possibly it had been broken through at the other hole by a lance thrust. The crown is thick, and formed at the angle requisite to deflect the lance. Over the real crown is riveted a reinforcing piece, which comes right down to the edge of the ocularium. A remarkable feature is that, although the crown has this extra piece added to the top, another and third thickness is obtained by covering the inside with a thick piece of rather coarse metal from the edge of the eye-slit to the top of the crown. This third piece is riveted through the two other plates, viz. the crown and top reinforcing piece, and points to its being a later addition. On the right side there is the usual large rectangular opening for hearing and also for air, the metal being turned back to form a guard for the opening. This opening in most cases must have been an afterthought. The openings are generally roughly made, and the turned-out piece being almost at right-angles to the side was liable to be broken off by the lance, which seems to have occurred in this example.

The front portion of no. 1 is almost certainly of English make, and early of its class. It resembles in outline the best example known of these English tilting heaumes, the 'Brocas' now in the Woolwich Collection. There are several others of the class still in churches, as at Ashford, Petworth, Westminster, Windsor, and Haseley, but some of these are shorter and of heavier make.

Similar tilting heaumes of continental make are generally fluted. A fine example is shown in Albert Dürer's etching of a heaume with a cock as crest, where the artist has run riot with his graver and shows a wealth of scroll-work as mantling for the crest.

Our first printer at Westminster in his second and illustrated edition of the *Game and Playe of the Chesse*, 1482, gives a wood-

cut showing the knight wearing just such a heaume as that to which the front of no. 1 belonged.



Fig. 2. THE DARELL HELMET : FRONT AND LEFT SIDE.

Now as to the back of no. 1. This is the greater part of the back of a large bascinet, somewhat similar to a heaume in being supported on the shoulders. There is a con-

siderable number of these large bascinets still to be found in English churches. It is a form only found in England, and must have been evolved from the early bascinet of the fourteenth century by lengthening it to rest on the shoulder, and by dispensing with the camail. With it could be worn visors for different uses. Where the holes appear on each side of the crown, short pieces with hinge slots working on pivots were permanently fixed. The visors had corresponding hinge slots, which fitted into those of the short pieces, and were secured by pins passing through both. When a different visor was to be used, the existing one was released by pulling up the pins, and another substituted. Smaller holes appear near the large pivot holes; these held eyelets, to which the short chains securing the pins were attached. There are examples of the different visors to be seen in various churches. At Willington, Beds., is a very fine example with a visor for tilting, over a Gostwick tomb. Another is at Birling, Kent, with the Nevill crest—a well-carved bull and chain. At Cobham there is a bascinet with a visor resembling that of an armet fitting into a buffe; this is presumably one for war purposes. These great bascinets were much used for fighting on foot, in which case smooth rounded visors or fluted visors of bellows appearance, with a number of small slits for vision and air, were used with them. A good example of the former was in the destroyed church of Rayne, Essex. This passed to Baron de Cosson's collection, and now has got to the Metropolitan Museum, New York. At Wimborne Minster is a large bascinet, with visor of the latter pattern, near the tomb of a duke of Somerset. It will be noticed that the portion of the bascinet we are discussing has been very roughly cut, or rather broken, away to fit it to the front part. It seems difficult to understand why it should have been cut at all, as the front part would have overlapped it, and the effect would have been neater. The probability is that this portion of armour was already a broken and discarded piece when chosen by the undertaker for the present purpose.

The front and back portions of no. 1 are joined by three metal straps, which may have been cut from the back part. One strap connects the two crowns, a narrow one the left side and a broader one the right, higher up. The effect of the whole, if somewhat contracted at the neck, is good.

The crest, a Saracen's head, is boldly carved and in good condition. The somewhat untidy folds of the twisted turban are well rendered and give a picturesque appearance. The colour of the turban is blue and white.

The second helmet comes under the head of those made only for funeral purposes. In many instances they were roughly put

together, and had little of the character of real ones. This specimen, though not real, is a dummy 'with a circumstance',



Fig. 3. THE DARELL HELMET: BACK.

as no doubt it was made so that it should correspond with no. 1 (already hanging on the wall), and does so when viewed from below.

It is of better make than most of the class, and has been well put together with rivets; the curves at the neck are properly hammered out. The crest is similar to that of no. 1, but not so well carved. Till quite recently it was supposed that the bulk of the helmets in churches were of this description, but this is not the case, the dummy ones being quite in the minority. A greater proportion are of the class of no. 1, consisting of real pieces put together to make the funeral helmet. As very early portions were often used, these are generally very interesting.

In churches quite close to Little Chart there are two other helmets, one at Ashford—the 'Fogge' heaume—similar to the front of no. 1, and at Brabourne, the greater part of a bascinet similar to the back part of no. 1. It would be interesting to compare them with the similar parts in no. 1. I think in helmet no. 1 we have an unusually interesting specimen of a church helmet, made of two distinct and rare pieces of real armour.

Mr. PALEY BAILDON emphasized a few legal points. The year 1400 was an early date for marriage settlements or articles, which were not commonly found in charter chests. The text should be printed in full, as it threw light on the social condition of the landed classes. The bride and bridegroom in that case were both of tender years, but brides and sometimes husbands also had to remain some time with their parents. It was interesting to know that fines were 'passed' before the mayor of Faversham, 'levy' being the term more generally used. A minor problem was to decide which came first—the Chichele marriage or the stewardship.

Mr. DALE inquired as to the identity of William, known as the wild Darell.

Mr. SKILBECK spoke of a roll twenty-five feet long in the possession of Mr. Darell Jeffery, which recorded the family from the time of Elizabeth to the present day.

Mr. GARRAWAY RICE referred to the monument at Pagham of a Darell who owned that manor and was said to be descended from Marmaduke.

Mr. DENMAN was especially interested in the paper because at the beginning of the seventeenth century two Darell brothers married two sisters of his own name and family, namely, Edward Darell who married Barbara and William who married Ann,

daughters and coheirs of the Rev. Francis Denman, rector of West Retford.

With regard to the doubt in Mr. Griffin's mind as to when the manor of Capel came into the Darell family, the following extract from *Calend. Rot. in turri Londin.*, p. 308, under the year 1465, might help: 'Rex concessit Willelmo Darell de comitatu Kanciac manerium de Capell in eodem comitatu per servitium unius denarii, pro omnibus servitiis.'

H. S. KINGSFORD, Esq., Assistant Secretary, presented the following report on the Society's collection of seals:

So far as I have been able to discover it is now nearly forty years since a report was presented to the Society on its collection of seals, although papers on various series have been common. As it is perhaps unnecessary to say that many additions have been made in the interval, the present may not be an inopportune moment to present another.

The Society now possesses something under 10,000 examples, excluding duplicates. These are mostly sulphur, plaster, or gutta-percha casts, but there is a certain number of original impressions either detached or still attached to the documents to which they belong. In addition we possess some two dozen matrices. All the casts have been mounted on cards, giving the name, etc., and arranged in drawers in the two museum rooms, the cases in the south room containing the English, Scottish, and Irish series, and those in the north room the foreign. The detached seals and matrices are in a table case in the south room. At present the foreign seals are not properly arranged, partly owing to lack of drawer space, but a card index has been made of every seal in the collection, and in the case of the English, Scottish, and Irish seals this has been supplemented by a short description, details of the size, shape, and a transcript of the inscription. This information is in process of being added to the cards of the foreign specimens, and thus, in a short time I hope, a complete catalogue of the collection will have been prepared.

It is mainly due to the late Mr. Albert Way that the Society has any real collection at all. For years he had gathered together a large number of casts, and some of these he presented during his lifetime. On his death in 1874, his widow, acting in accordance with his expressed wishes, presented¹ the whole of his really remarkable collection to the Society, and its extent may be judged from the fact that it took nearly six years for this to be gone through, listed, and arranged. Other donors were Mr. Prattinton, from whom many of the Worcestershire

¹ *Proceedings*, vi, 200, 313.

seals came, Sir Wollaston Franks, who gave a very large number of specimens, including casts from the seals on the Barons' letter, and many from seals preserved in the muniment rooms at Cambridge, the Hon. A. Dillon, Mr. H. A. Rye, Sir William Hope, and others too numerous to mention.

To a former Treasurer of the Society, the late Mr. Spencer Perceval, fell the congenial task of arranging and cataloguing Mr. Way's collection, and on various occasions he presented reports to the Society detailing the progress he had made. His final report in 1882¹ contained a full description of the system of classification and arrangement which he had adopted, and on this classification I should like to say a few words.

Mr. Perceval's scheme was adapted from one by Mr. W. S. Walford, and was briefly as follows:

He divided the seals into two divisions, Ecclesiastical and Lay, which were designated by the letters E and L respectively. Each of these was then divided into categories and subdivisions. The arrangement of division E was: I. Seals of individuals, divided into (1) popes and patriarchs; (2) cardinals; (3) archbishops and bishops; (4) heads of churches, religious houses, or communities, subdivided into (A) secular and (B) regular; (5) other dignified or beneficed ecclesiastics, divided into (A) archdeacons, chancellors, etc., (B) canons, (C) dignified ecclesiastics of the Roman court, (D) rectors, archpriests, vicars, etc., (E) other dignified or beneficed ecclesiastics, secular or regular.

E. II consisted of common seals of corporate bodies, subdivided into (1) secular, with five subdivisions; (2) regular, with two subdivisions and ten further divisions of the second subdivision; (3) friaries, military orders, etc., with eight subdivisions; (4) hospitals; (5) universities; (6) religious confraternities; (7) others.

E. III was official seals, divided into (1) courts christian, and spiritual judges, with seven subdivisions; and (2) heads of churches, monasteries, etc., with five subdivisions.

E. IV contained seals purely personal, and E. V miscellaneous.

Division L, lay, was divided into: I. Seals of sovereigns, with four subdivisions. II. Seals of consorts and daughters of sovereigns. III. Seals of male issue of sovereigns. IV. Official seals, divided into (1) courts of justice, with two subdivisions, each again divided four times; (2) admirals, admiralty, and great officers of state; (3) sheriffs, coroners, etc., (4) fiscal; (5) seals under statutes; (6) others. V. Common seals, divided with many subdivisions into (1) municipal; (2) gilds; (3) schools; (4) others. VI. Personal, with many subdivisions; and VII. Miscellaneous.

¹ *Proceedings*, ix, 181.

Ecclesiastical seals and the non-royal or official in the lay division were not separated into English and foreign.

Under an arrangement of this sort it was possible to put almost any given seal into a category, and the main divisions are the obvious ones under which any collection would be catalogued. But the subdivisions are exceedingly minute, especially as regards monastic houses and municipal seals, as the following extracts will show:

E. II. 2. Foundations of regular clergy.

A. Cathedrals with monastic chapters.

B. Abbeys, and priories, not being cathedral priories, arranged according to the type or principal subject of each seal, viz.:

(a) The Holy Trinity.

(b) The Nativity, Transfiguration, Passion, Resurrection, etc., and the Majesty, the Saviour in Glory, or the Last Judgement.

(c) The Holy Rood.

(d) The B.V.M. and Divine Infant.

(α) without } simple architectural accessories; and
(β) with }

(γ) with votary, or

(δ) accompanied by other saints.

(e) The Annunciation, Assumption, and Coronation, B.V.M.

(f) A single saint, or a group illustrating his legend: without, or with, simple architectural accessories; with votary.

(g) Two or more saints, or group as before.

(h) Subjects compounded with several figures of saints or other personages, and architecture, or architectural compositions adorned with figures.

(i) Purely architectural representations.

(k) Other subjects.

L. V. 1. Municipal seals.

A. Cities and towns, arranged according to type or subject as follows:

(a) Castles, or representation of a town—without, or with, heraldry.

(b) Ships.

(c) Saints—without, or with, heraldry, or architectural accessories.

(d) Heraldry alone, or forming the principal subject.

(e) Devices compounded of any of the foregoing.

(f) Other devices.

- B. *Communes*, and the like (mostly foreign seals), arranged as before, according to type.

It was not without considerable thought and a good deal of consultation that it was decided that this classification was too cumbersome and minute for practical purposes, and that it should be modified. But it may be said in extenuation, if extenuation be needed, that the arrangement had already broken down in practice. A concrete example will perhaps best show the disadvantages of Mr. Perceval's scheme, and for this purpose the case of the seals of the abbey of Athelney may be taken as typical.

The first seal of this religious house consists of a representation of the church, and would have been classed under division E, section II, subsection B, subsection i: i.e. the common seal of an abbey, the type of which is a purely architectural representation. The second seal of this house contains figures of our Lord with Saints Peter and Paul, and the classification would have been difficult. Figures of our Lord in Glory would go under E. II. 2. B. b, but probably this particular seal would have been put under E. II. 2. B. h, i.e. subjects compounded with several figures of saints or other personages. Then the seals of the abbots would have had to be separated from those of the house, and would have been classed under E. I. 4. B, if personal, or E. III. 2. B, if official. This arrangement, therefore, would have resulted in the seals of this religious house being divided up among several drawers, rendering quick reference extremely difficult.

Such being the disadvantages of Mr. Perceval's scheme, it became necessary to look for a better, or at least a simpler. It is obvious that where it failed was in over-elaboration; its main divisions cannot be improved upon. All it required was simplification, and it appeared that an alphabetical classification, within the obvious classes, combined with a chronological one, would give the desired result. In its main divisions, therefore, Mr. Perceval's arrangement has been retained, but it has been simplified by abolishing the typological subdivisions, with the result that it has been possible to keep together all the seals referring to one house, family, person, town, etc. But as Mr. Perceval's system has many recommendations it will, I hope, be possible in time to provide, from the large number of duplicates, a few series arranged under a typological classification. The collection is now arranged and catalogued as follows:

For the English seals five cases of forty-five drawers each have been appropriated. These are in the south museum room, and are lettered A to D, and F.

In case A will be found royal seals, namely, the great seals of sovereigns and their privy seals and signets, all arranged in chronological order; the seals of queens consort; of direct descendants of sovereigns who bear the royal arms; judicial seals, and seals for particular jurisdictions, such as the Duchy of Lancaster, Chester, and Flint, Wales and the Marches. All these are arranged chronologically under their several divisions.

In case B are monastic and cathedral seals. These are arranged alphabetically under the house, but chronologically under each house, thus: first, those of the house itself; second, those of the head of the house, or dean in the case of a secular cathedral; third, those of the obedientiaries or cathedral officers. Hospitals, military orders, peculiar jurisdictions, etc., are in this case.

Case C contains archbishops and bishops, arranged alphabetically as to sees, except that the two metropolitan sees come first, and chronologically under the bishops. Archdeacons and rural deans are also in this case, arranged alphabetically under the archdeaconry and deanery.

In case D is a miscellaneous collection. In drawers 1-15 are municipal seals arranged alphabetically. The remaining drawers contain those of universities and their colleges, schools, companies and guilds, admiralty seals, sheriffs, customs, seals under the Statute Merchant and Statute of Labourers, and the few we have of British Dominions.

In case F will be found personal seals, other than royal, episcopal, and clerical officials. These are arranged alphabetically, and the class contains all seals of individuals, with the above exceptions, whether equestrian, ladies, heraldic, or with miscellaneous devices, such as saints, merchants' marks, monograms, etc. Thus the seals of such families as the Beauchamps, Clares, Nevills, and Percys will be found together.

Case E has been retained for Scottish and Irish seals, and the cases in the north room, G and H, will be filled with foreign seals. The system of arrangement in these is the same as that of the English seals, with a few slight modifications.

In conclusion, it may be profitable to compare the Society's collection with that of the British Museum, for the purpose of showing where our collection is strong, and of drawing attention to gaps which it is advisable to fill up.

Of the great seals of sovereigns the Society has practically a complete set, the only omissions being the first, second, and fourth seals of Henry I, the third, fourth, and sixth of Henry VI,

the first of Edward IV, the third of Charles I, the first of the Commonwealth, the first of Charles II, but of this seal, with the exception of a fragment in the British Museum, only two impressions are known, and of both the Society has a photograph, the second and counter of the third of George III, the obverse of George IV, and those of Edward VII and his present Majesty.

Of the privy seals we compare well with the British Museum for the earlier kings, but want many of the later. As regards signets the Society's collection is fairly well off.

In judicial seals the Society's collection is poorly represented so far as the Court of King's Bench is concerned, but for the Court of Common Pleas we are better off than the Museum. In exchequer seals we are well represented, and the same may be said of miscellaneous judicial seals. There are a few gaps in the seals of queens consort, but none of great importance, and of the seals of royal personages, i. e. the sons and daughters of sovereigns, we have a very representative collection. On the whole, therefore, it may be said that so far as the general heading Royal Seals is concerned the Society's collection compares very favourably with that of the British Museum.

Unfortunately the same cannot be said of monastic seals. Here our deficiency is glaring, and some 2,000 seals are wanted before we can approach the numbers contained in the Museum. Of the seals of cathedrals, we are especially badly off for those of the secular churches; for example, we have only one of the seals of St. Paul's Cathedral.

With the seals of bishops, however, comes a great improvement. There are practically no omissions at all, so far at least as the pre-Reformation series are concerned. Of municipal seals, thanks in the main to Sir William Hope, we have practically a complete set. Of universities, Cambridge is excellent, there being only some half-dozen missing. Oxford, on the other hand, is bad, but with a little trouble it may be possible to make good some at least of the deficiencies. However, this may be said, that even for Oxford our collection is not far behind that of the Museum, while for Cambridge it is far in advance of it. There are not many seals of schools in the collection, but it does not compare very unfavourably with the Museum. With regard to companies and gilds, there are many gaps in those of the London companies, most of which it should be possible to fill. For the seals of admirals, sheriffs, customs, etc., we compare very favourably with the Museum collection.

In the large section of personal seals it is of course impossible, and would not be practicable, to approach the numbers preserved in the Museum. The most that can be aimed at is a representative series, and that we have certainly got.

The Scottish and Irish series are, unfortunately, not large, but are, on the whole, representative; but we have a very poor collection of foreign seals, except for a fairly complete set of those of the emperors.

To sum up: where the Society's collection badly wants strengthening is in the monastic and cathedral series, Oxford University, the London City companies,¹ and foreign seals generally, and any Fellow who can help in this will be doing a real service to the Society. But I need hardly say that an impression of any seal not in the collection will be most welcome. Many Fellows, too, must have documents with good seals attached from which casts could be made, and these would all serve to make the Society's collection more representative and useful.

The CHAIRMAN expressed the Society's gratitude to the Assistant Secretary for putting its house in order and bringing to light many treasures little known to the Fellows, many of whom might be able to fill gaps in the collection of seal-impressions.

Mr. BIRCH said no account of any seal-collection would be complete without a reference to the services of Mr. Doubleday, and later Mr. Ready, of the British Museum, who had together provided a large proportion of the casts. Mr. Kingsford had done much to make the Society appreciate the value and extent of its seal-collection. In connexion with the great seals of England Mr. Alan Wyon had spent much time and money in augmenting the series, and was responsible for an imposing volume on the subject. He had himself spent thirty years of his official life in cataloguing the British Museum collection. It would be long before the set of royal seals was complete, and there was a wide field for future investigation. He regretted that the British Museum catalogue had not been completed, as a seventh volume would include such interesting items as the seal of Shakespeare.

Thanks were ordered to be returned for these communications.

¹ Since this report was presented the Society has acquired a number of the seals of the London companies.

THURSDAY, 15th MAY 1919.

Lieut.-Colonel GEORGE BABINGTON CROFT LYONS,
Vice-President, in the Chair.

Notice was given of the ballot for the election of Fellows to be held on Thursday, 5th June 1919, and a list of the candidates to be put to the ballot was read.

C. L. KINGSFORD, Esq., M.A., F.S.A., read a paper on Two Forfeitures in the year of Agincourt, which will be printed in *Archaeologia*.

The forfeitures in question were those of Henry, Lord Scrope, who was executed at Southampton for his share in the Earl of Cambridge's conspiracy, on 9th August 1415, and of Richard Gurmyn, the Lollard, who was burnt for heresy in September of the same year.

Scrope was possessed of great wealth, and the inquisitions taken on his forfeiture were of much interest. In London he owned Scrope's Inn, on the Thames; he had nearly £1,000 on loan, £400 of plate, clothes, armour, furniture, and a barge and its fittings. A great deal of his property was probably with him at Southampton, and the inquisition taken there had not been preserved. He had other property in Suffolk, Lincolnshire, Newcastle, and Yorkshire. Amongst the property upon which the King's Council held an inquiry was a collection of 120 copes and other vestments, and eighty books. The author compared the inventories with Scrope's will, and was able to identify some of the chattels as occurring in both documents.

Gurmyn's inventory was small by comparison, but proved him to have been a man of some means. It was interesting to note that the amount of furniture did not compare unfavourably with that belonging to Lord Scrope.

Mr. PALEY BAILDON suggested that the term 'debles' as applied to the feet of a bowl was derived from a well-known name for a crab.

Mr. GIUSEPPI remarked on the long time taken by proceedings in the Exchequer, a not uncommon experience in the fifteenth century. During that period the whole machinery of the Exchequer broke down and had to be restored under Henry VII. One of the most interesting items was the list of books, and it

might be remembered that there was no mention of books a century earlier in the accounts of *Bogo de Clare*.

Mr. DALL mentioned that *Scrope* and three of his supporters were buried at Southampton in God's House, or the church of St. Julian, which was restored in 1877, when the body of Richard, Earl of Cambridge, was found with the head between the knees. There was no contemporary monument, but the names were at the present time cut in the wall. Grey, like *Scrope*, was dragged to the place of execution on a hurdle, but Cambridge was spared that indignity and allowed to walk. The plot was hatched at Hamble, and *Scrope* would have had arms and armour with him as he was supposed to be going to fight in France.

Mr. ALAN MOORE said it was clear that the term barge included several types of vessels. In the navy under Henry IV in 1412 there was a barge of considerable size for the period with a square sail of twenty yards; but the vessel mentioned in the paper had no masts or sails, and probably resembled a barge of the City companies. One of the City barges was transferred to Oxford for use as a college barge. He had notes of two barges in the preceding reign, but they were quite different from that mentioned by Mr. Kingsford, and the various meanings of the term often led to confusion.

Mr. QUARRELL drew attention to the large proportion of silver-gilt plate, and to the practice of mounting cups upon lions. One at New College, Oxford, was mounted on two lions. The term 'scalding' evidently had reference to a pig, and in the west of England it meant a small pig in bad condition. In Herefordshire and Worcestershire the word 'nigull' was used in the same sense.

The CHAIRMAN thought the thirteen spoons mentioned were a set of Apostles with the master spoon. Desmas was known as the penitent thief, and it was interesting to have the name of the other, Gismas. Mr. Kingsford had ably handled a great mass of material, and his only regret was that so few details of the plate had survived.

Thanks were ordered to be returned for this communication.

THURSDAY, 22nd MAY 1919.

WILLIAM PAGE, Esq., Vice-President, in the Chair.

The following were admitted Fellows :

The Rev. William Macgregor, M.A.
Professor John Edward Lloyd, M.A.
Canon John Fisher, B.D.

Notice was again given of the ballot for the election of Fellows to be held on Thursday, 5th June, and the list of candidates to be put to the ballot was read.

Professor W. R. LETHABY read a paper on the origin of London, in which he put forward the view that London had its origin in the port of Verulamium. The site of the city could not be approached from the east or west on account of the rivers Lea and Fleet, and his suggestion was that the first approach to the city was from what are now Hampstead and Highgate, by means of an ancient road which led from St. Albans by way of Barnet, Crouch End, Islington, and Aldersgate Street. Before the Roman conquest Verulam was the capital of the leading British kingdom, and it was as the port to this town, the traffic going along the above-mentioned road, that London had its origin.

The CHAIRMAN said the paper was specially acceptable to the Society of Antiquaries of London, but he was inclined to agree with Professor Haverfield that the pre-Roman settlement at London was insignificant. The soil of London had been continually turned over but he knew only of one ancient British coin being found. The Romans quickly perceived that the estuary of the Walbrook might be turned to commercial uses, and London soon rose to eminence. It was more than probable that the Watling Street continued down Park Lane to Westminster and crossed the river at that point; but excavations in search of it near the Marble Arch had been unsuccessful (*Proceedings*, xxiv, 137). Perhaps it was not paved before the route was diverted through the City. He did not recognize any British or Roman features in the alternative road from Verulam suggested by Mr. Lethaby, and doubted its early date, as Watling Street was the route given in the Itineraries between London and Verulam. There were only four entrances through the ramparts of Verulam and all could be accounted for otherwise. From the Chronicles compiled at

St. Albans it was clear that in Saxon times the route to London was by Watling Street. About the twelfth century the road to London was by Shenley. Owing to an enclosure for Sir Richard Lee's park at Sopwell in 1562 the St. Albans end of this road was closed, and a new road out of the town was made in its place. This was now known as the Old London Road, and took the route by Barnet to London, incorporating portions of existing roads. In 1794 a new entrance for this road was made into St. Albans and the road straightened and improved. It was to the Barnet route that Mr. Lethaby referred.

Mr. REGINALD SMITH said the main argument of the paper rested on the identity of the ancient British road between Verulam and London. He quite agreed that London began as the port of Verulam, and thought it likely that foreign goods such as the wine-jars and bronzes found at Welwyn were shipped up the Thames. Camden mentioned that part at least of the road in question was made 300 years before his time by licence of the bishops of London (Gough's edition of 1806, vol. ii, 87 and 108); and though Mr. Lethaby had explained that in another way, Camden and Norden both mentioned a Roman Road from London to St. Albans over Hampstead Heath. In addition to the details given in *Archaeologia*, lxviii, 244, it might be mentioned that the Ancient Street at Hendon probably continued by Collin Deep Lane across the Watling Street (or its site) to Stanmore, Bushey, Watford, Hemel Hempstead, and Tring to Aylesbury; and perhaps before Watling Street (Edgware Road) was made, Verulam was served by the present branch road from Watford. He considered Old Street as a substitute for the straight line on the nearest high ground when the Roman road from Old Ford to Holborn Bridge was interrupted by the floods in Moorfields, due to the damming of the Fleet river by London Wall (*V. C. H. London*, i, 38).

Rev. H. F. WESTLAKE supported the Chairman's contention that the Roman road from Verulam passed beyond the Marble Arch to Hyde Park Corner, south of which was a town known as the Ville of Eye, the inhabitants of which included Richard the Hermit. It would not have come into existence without some road to the north of it, as that was the only direction in which it could be approached. It was bounded by Marsfleet (in the later Parliament Street) and St. Edward's watercourse, which was a continuation of Marsfleet.

Mr. PALEY BAILDON said it was an assumption that all foreign goods came through the port of London. In very early times

the natural course would have been to land on the Kent coast and proceed overland. Nothing had been found to show that London was an extensive British settlement, and it was not a necessity as a port. He could not accept the suggestion that the roads from London to the coast of Kent were made to complete the scheme of road transit from Verulam to London.

Mr. LETHABY replied that time failed him to deal with all the points raised. Caesar did not mention London, but most authorities agreed that the town sprang up after his raids. The early date of the road from Verulam had not been seriously challenged, and his own view was that the river was crossed from Westminster to Stangate, that name going back at least to 1493. When William Rufus's great hall was built about 1110, the crossing was diverted to Horseferry. He had collected many minute details on the subject, such as an order of Henry III for completing a barge to convey passengers and horses across the Thames.

Thanks were ordered to be returned for this communication.

THURSDAY, 5th JUNE 1919.

Lieut.-Colonel GEORGE BABINGTON CROFT LYONS,
Vice-President, in the Chair.

Notice was given of a ballot for the election of Honorary Fellows to be held on Thursday, June 26th, and a list of the candidates to be put to the ballot was read.

Captain J. E. ACLAND, F.S.A., exhibited a twisted iron torc found in a Roman grave at Pomeroy, near Dorchester.

W. J. HEMP, Esq., F.S.A., exhibited six objects of brass or bronze found together in Merionethshire in 1918. They were discovered in a small scree, hidden in a cavity under a large stone in the very rough country, on the south side of the Cwm Nant Col some four miles east of Llanbedr, not far from the small lake known as Llyn Péfeddau, and at height of nearly 1,500 feet.

The hoard consisted of (1) a bronze aquamanile in the form

of a stag, now 11 in. high, but each antler has been broken off, leaving only one tine complete. The hinged lid is in the head, measuring $\frac{3}{4}$ by $\frac{1}{2}$ in., and in the centre of the breast the usual rectangular piece of metal has been brazed in, of the same dimensions as the lid.



OBJECTS OF BRASS OR BRONZE FOUND IN MERIONETHSHIRE.

The handle is of the typical serpent form, cast hollow, and the tail is broad and flat, measuring 1 in. across and 2 in. long.

There is an irregular hole in the left shoulder apparently due to the dripping of water while the ewer was in its hiding-place, and two circular pieces of metal of $\frac{1}{2}$ in. in diameter have been brazed in (presumably to repair flaws in the casting), one over the left eye and one between the antlers.

(2) A bronze tripod with two loop handles under the rim—which in this case show no signs of wear, although the legs have been considerably eaten away by fire.

It is $8\frac{1}{2}$ in. high and $8\frac{1}{8}$ in. across the mouth; the inside is smooth, the outside is very rough, showing the perpendicular junction of the two portions of the mould and two very irregular horizontal lines for decoration.

(3) A smaller tripod, which originally had a long handle now broken off short, with a loop underneath it; the stump of the handle bears a deeply-cut fretty pattern, on the body are three horizontal raised lines varying from $\frac{1}{2}$ to $\frac{3}{4}$ in. apart crossed by sets of three lines carried up from each leg. In this case also the junction of the two halves of the mould is clearly marked. One leg has been partly broken away. The measurements are height: 5 in., diameter at mouth $5\frac{1}{4}$ in.

(4) A still smaller tripod is $4\frac{1}{2}$ in. high, and measures $4\frac{5}{8}$ in. across the mouth. The long handle is intact and is $4\frac{3}{8}$ in. long. This also has been cast from a double mould. It shows many signs of use, two of the legs have been broken off and new ones clumsily brazed on and in one case the joint is not watertight; one leg also is 2 in. long the other two being only 1 in., and as many as eleven holes have been mended, in most cases by the insertion of a coiled piece of brass which has been driven tightly into the hole and the ends have then been filed down level with the surface inside and out.

(5) A jug $6\frac{3}{8}$ in. high, $3\frac{1}{4}$ in. wide at base, and $2\frac{3}{8}$ in. at the top. It had a spout and handle brazed on on opposite sides, both now lost; the hole for the spout begins $\frac{7}{8}$ in. below the rim and is $1\frac{1}{2}$ in. long. The vessel has been spun, and with the stag is of much better workmanship and finish than are the tripods.

(6) A large and shallow tray $2\frac{1}{8}$ in. deep, of which the outside measurement of the diameter is 1 ft. $5\frac{1}{2}$ in., the rim being 1 in. wide. It is of thin metal, the rim being strengthened by the addition of a band underneath riveted on by sixteen studs, with globular heads of slightly varying sizes. There were originally two 'drop' handles terminated with small animal heads, working in rings riveted to the upper side of the rim. One of the handles with its rings is lost.

With the above were found another bronze pot, an iron axe bearing an incised cross crosslet, and many fragments of iron and rust which may have been the remains of fire dogs of simple pattern, but the fragments are too broken to allow of any very definite conclusions being formed.

The owners, who kindly allowed the objects to be exhibited, are Mr. H. T. Wright and Mr. Ivor Lewis, both of Llanbedr.

This being an evening appointed for the election of Fellows no papers were read.

The ballot opened at 8.45 p.m. and closed at 9.30 p.m., when the following were declared elected Fellows of the Society:

Charles Singer, M.D., F.R.C.P.

Sir William Ryland Dent Adkins, Knt., M.P.

Colonel William Llewelyn Morgan, J.P., D.L.

William Self Weeks, Esq.

Bernard Page Scattergood, Esq., M.A.

Antonio Fernando de Navarro, Esq.

Arthur Percival Newton, Esq., M.A., B.Litt., B.Sc.

THURSDAY, 19th JUNE 1919.

Sir CHARLES HERCULES READ, Knt., LL.D.,
President, in the Chair.

The following were admitted Fellows:

Antonio Fernando de Navarro, Esq.

Bernard Page Scattergood, Esq., M.A.

Arthur Percival Newton, Esq., M.A., B.Litt., B.Sc.

Notice was again given of the ballot for the election of Honorary Fellows to be held on Thursday, 26th June, and the list of candidates to be put to the ballot was read.

The PRESIDENT, on taking the Chair for the first time since his election, expressed his appreciation of the honour done him in electing him to the Presidency for a second term, and his regret that owing to illness he had been unable to be present before.

Whereupon a vote of congratulation to the President upon his recovery from illness was proposed by Lieut.-Colonel GEORGE BABINGTON CROFT LYONS, Vice-President, and was carried by acclamation.

The PRESIDENT expressed his thanks.

Sir WILLIAM MARTIN CONWAY, M.A., M.P., Vice-President, read a paper on portable reliquaries of the early medieval period:

Without attempting in this paper to write a complete history of Christian Reliquaries from their first introduction, it may be worth while to examine briefly the earliest surviving types and to inspect some examples of them. Small reliquary boxes worn on the person seem to have preceded the pectoral reliquary crosses which are first mentioned in the time of St. Gregory. Such little reliquary boxes are mentioned in the Life of St. Amateur, Bishop of Auxerre, who lived at the end of the fourth and beginning of the fifth century.¹ Examples are known having the form of a *bullæ*. Others of a rectangular box shape in gold dating from the fourth century were found in the Vatican cemetery in 1571.²

From the fourth century onward we read of relics buried under altars.³ The well-known silver casket in S. Nazaro at Milan was found in 1894 in a stone urn beneath the pavement near the altar. It was probably used to contain relics thus buried on the occasion of the consecration of the church in A.D. 382. Daniel judging the Elders and other subjects are embossed on the lid and the four sides.⁴ Another fourth-century silver example, of polygonal form with figures of Christ and the Apostles upon it, was found at Aquileja and carried away to Vienna.

The well-known fifth-century silver cylindrical reliquary from Grado⁵ and the oval flat-topped example found with it under the high altar may lead us on to a sixth-century group of oval silver capsellæ with lids tortoise-shaped or flat, of which the following is a list, perhaps incomplete:

Vatican Museum, from Henchir Zirara (near Carthage), embossed with a figure of a martyr on the lid and sheep in a band round the middle (*Mon. et Mém.*, 1906, pl. XIX) (fig. 1).

Vatican Museum, from the Sancta Sanctorum Chapel, with embossed medallions and decorations (*Mon. et Mém.*, 1907, pl. XII, p. 71).

Louvre, the Capsella of Brivio (perhaps fifth century, *Mon. et*

¹ *Act. sanct.*, t. i, Maii, p. 57.

² *Bull. d'archéol. chrét.*, 1875, p. 156 note.

³ *Bull. Mon.*, 1889, p. 376 ff.

⁴ See photos in *Mon. et Mém.* (Piot), vii, 1900, pl. 19, and Cabrol's *Dict.*, iii, col. 1112.

⁵ R. de Fleury, *La Messe*, v, pl. 359 (after De Rossi). The promised drawing of the lid, with the Virgin and Child upon it, seems never to have been issued.

Mém., 1906, pl. XIX), with the Raising of Lazarus on the lid, the Adoration of the Magi and the Three Children round the sides. Coarse work.

Innsbruck Museum from S. Zeno in the Valle di Non, found within a stone box of sarcophagus form (*Archivio stor. per Trieste*, etc., Rome, 1883, p. 147).

A plain oval example found under the altar in the SS. Apostoli Church, Rome, to be dated 560-72 (De Rossi in *Bull. Mon.*, 1889, p. 321 ff., with mention of a few examples in ivory, terra-cotta, etc.).



Fig. 1. SILVER CAPSELLA, VATICAN.

The silver reliquary from the altar of St. Andrew at Rimini is a small oblong box of sixth-century date. It was found within a wooden box.¹ Leaden examples of like form are known.² More elaborate and artistic is the silver casket found in 1893 in a tomb in S. Sophia at Sofia. It contained relics.³

Several of the above-mentioned reliquaries were found within stone receptacles. Examples of stone reliquaries are numerous. One from Dala'a in North Africa contained the blood of St. Felicianus in a bottle.⁴ Another, of alabaster, is in the

¹ R. de Fleury, *La Messe*, i, p. 143, pl. 53. See also *loc. cit.*, v, pl. 359, apparently not referred to in the text.

² *Bull. di archeol. dalmata*, 1904, pl. 1.

³ Cabrol's *Dict.*, ii, col. 2346 ff.

⁴ Cabrol's *Dict.*, i, col. 1774.

Cathedral Treasury at Aosta.¹ It is decorated with incised crosses. A more elaborately decorated example in Berlin Museum came from Ravenna.² Four small stone reliquaries of sarcophagus form come from the Valle di Non (Trentino): one of them is in Innsbruck Museum. It contained a silver capsella.³ A small marble example of this form from Asia Minor is in the Berlin Museum (cat. no. 1627).⁴ All the foregoing are of approximately sixth-century date.

A very well-known and often reproduced ivory in the Cathedral of Trèves shows the translation of relics to a Byzantine church, believed to be that of St. Irene ἐν Συνκαίς at Constanti-

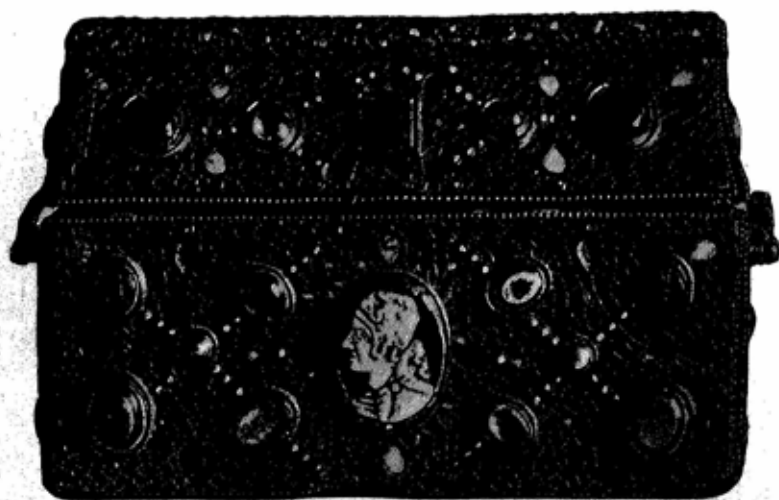


Fig. 2: SEVENTH-CENTURY RELIQUARY, ST. MAURICE D'AGAUNE (FRONT).

nople in the year 552.⁵ The relics are contained in a rectangular box with a four-sloped lid. It is carried by two ecclesiastics and resembles the stone reliquaries, but it may have been of metal.

A silver box of fourth- or fifth-century date was found at Sebastopol and taken to the Hermitage.⁶ Its form is obviously

¹ See the official Italian Catalogue, *Arte e Antichità*, 1st S., fascic. i, p. 43.

² *Amtl. Berichte*, May 1914.

³ *Arch. stor. per Trieste*, 1883, p. 147 (Brit. Mus. Lib. PP. 3557, C).

⁴ For other examples from North Africa see Cabrol's *Dict.*, ii, fig. 2173, cols. 2345-7.

⁵ Strzygowski, *Orient oder Rom*, p. 85.

⁶ See Cabrol's *Dict.*, iii, col. 3039, fig. 3351, and authorities cited.

derived from a sarcophagus with acroteria. On the front of the box three heads are embossed in medallions and there is a cross on the middle of one side of the lid. Whatever purpose the above-cited silver boxes were made to serve, this one was obviously intended to be a reliquary. It is a transitional form between a miniature sarcophagus and the type of the first group of portable reliquaries we have now to consider.

First Group.

The type is a brick-shaped box with a lid or roof of double slope, the ends being vertical and therefore gabled. The upper

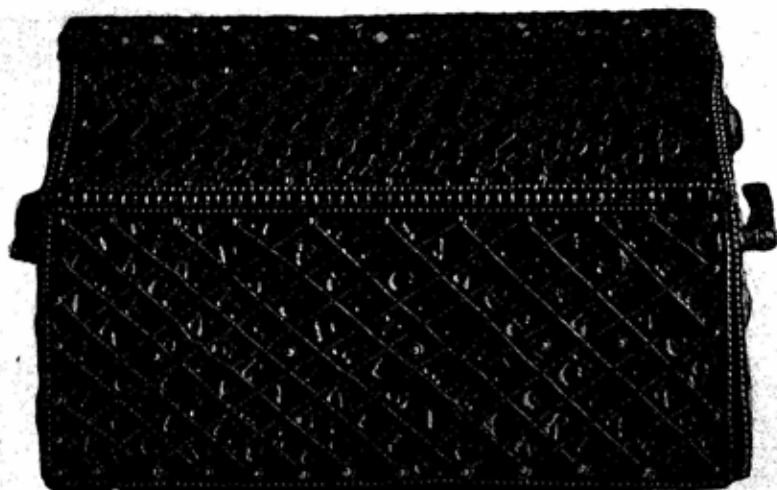


Fig. 3. SEVENTH-CENTURY RELIQUARY, ST. MAURICE D'AGAUNE (BACK).

part may be a true lid, opening on hinges, or it may be fixed and the opening contrived by means of a sliding panel at the bottom.

The finest example of this class and one of the finest pieces of early medieval goldsmith's work is the beautiful jewelled casket in the renowned treasury of the abbey at St. Maurice d'Againe in the upper Rhone Valley (figs. 2 and 3). The base measures $7\frac{1}{2}$ in. by $2\frac{1}{2}$ in. and the total height is $5\frac{1}{2}$ in. A rounded rib forms the crest. The substance of the structure is a silver box. The front of this is overlaid with a gold network of cloisons holding flat polished garnets and other coloured pastes like a mosaic. The front slope of the lid and the two ends are similarly adorned, while the cloisons on the ridge are filled with

blue enamels. On the flat surfaces thus embellished various gems are set within large grooved box-mountings, the boxes being riveted down. The centre of the front panel carries a glass cameo with a head in profile. There are also a number of pearls in smaller settings. The back panel and the back slope of the lid are decorated with twisted gold wires soldered on. In the case of the panels these wires form a reticulation, within each space of which a letter is stamped, the whole forming the following inscription :

*Teudericus presbiter in honores sc̃i Mauricii fieri iussit
Amen. Nordolaus et Rihlindis ordenarunt fabricare. Undiho
et Ello ficerunt.*

Here then we have the actual names of two artists of the seventh century: Undiho and Ello. These names I am informed by Mr. H. M. Chadwick are of Frankish, Alemannic, or Bavarian type. 'The name Undicho occurs in Bavarian and Rhine-Frank documents of the eighth and ninth centuries (Förstemann), though it is not common. The name Ello is not uncommon at a later period (especially eleventh century) in documents from various Frankish, Alemannic, and Bavarian districts.' As the casket was intended to be placed in the abbey of St. Maurice it was probably made in the neighbourhood, but artists in those days may have been as itinerant as their masters, and we cannot argue from the style of this work that it is the outcome of a local school.

To return to the chāsse itself. It will be observed that the handles, one at each end, are in their intended position when set upwards. They are in fact not handles at all but attachments for the ends of a strap. The casket was made to be carried about, the strap passing round the neck of the bearer and the box resting in his hands.

The glass cameo is interesting. It is not cut with a wheel but built up out of glass paste, moulded while in a viscous state. Only the head is of paste; the ground into which it is embedded is a brown substance of uncertain constitution. Other cameos of the kind are found on a reliquary at Cividale (mentioned below) and on a Carovingian bookbinding in Utrecht Archi-episcopal Museum.

The cloisonné mosaic of garnets and pastes and the groove-mounted stones set upon it explain a fragment of decorative goldsmith's work preserved in the Cabinet des Médailles in Paris, which has long been a puzzle to archaeologists. It is in fact no part of a personal ornament, but a panel from a casket of like structure to our reliquary. The back plate (which may have been of silver as at St. Maurice) is gone. Nothing remains

but the network of gold cloisons, most of the flat garnets, and some of the coloured pastes which they enframed. The work is much simpler and probably earlier in date than that of the St. Maurice casket, but it is of the same school. All the larger stones once held in the groove-mounts are lost. As the back of this object can be examined we are able to learn that the stones and pastes were wedged into the cloisons and that the uneven surface behind was levelled with some kind of cement or paste. The cloisons were not soldered down on to the backing-plate. The front appears to have been polished as a whole after the settings were finished.

Some fragments of a broken-up work of similar character and date are found on the hexagonal and pentagonal reliquaries in Conques Cathedral Treasury, both of which are made up out of pieces of older work. The tenth-century portable altar of St. Andrew in Trèves Cathedral likewise contains a fine circular fragment of substantially similar workmanship, but that is Byzantine—a most important link in the history of cloisonné jewel-mosaic to which sufficient attention has not been paid.

The question has still to be asked—was the St. Maurice casket intended for a reliquary or for some other purpose? It has been used as a reliquary from very early times, but it does not follow that it was made for that purpose. Rahault de Fleury (*La Messe*, iv, p. 82) describes a type of portable casket called a *Ministerium*. It was a small box attached to a strap for convenient carriage, and intended to contain a small chalice (such as the Gourdon example in the Cabinet des Médailles), a paten, portable altar, and the eucharistic elements. *Ministeria* continue to be mentioned down to Carolingian days. It is possible that some of the caskets with which I am dealing may originally have been *ministeria*.

Similar in form but vastly inferior in material and workmanship are the other reliquaries of this group. That at Saint-Benoît-sur-Loire is made of copper plates covering a wooden body. It is inscribed:

Mumma fieri iussit in amore Sce Marie + et Sci Petri.

It should be remembered that the Virgin and St. Peter were the primitive patrons of Fleury Abbey. The relics of St. Benedict were translated from Monte Cassino to Fleury at the end of the seventh or beginning of the eighth century. As St. Benedict is not mentioned the little châsse is probably of earlier date than the translation, and may be attributed to some date in the seventh century. As for the donor's name, it is noted that a certain Mummia in the year 695 made a donation to Saint-

Pierre-le-Vif at Sens.¹ The rectangular portion of this reliquary is rudely decorated with two rows of interlocking circles containing each a star or a cross. On the slope of the roof are six rudely embossed figures, apparently of angels. Art here reaches its lowest degradation.

A reliquary at Nona, Dalmatia, is known to me only from a most indifferent photograph in which the details are not clearly visible.² It is a wooden box (l. 24.5, ht. 12, br. 10 cm.) covered with silver plates. Those on the front and roof are embossed with circles containing eight-petalled rosettes, those on the ends with a winged figure in a medallion. Some coloured pastes are also mounted on the casket, and it has bronze feet of an early type. Resemblances to the St. Benoît reliquary are obvious, and both may be of approximately the same date.

Another reliquary of like form and about the same date is preserved in Coire Cathedral. I will return to it in connexion with the Celtic group.

A small and very simple reliquary which here best finds place is in the Treasury of Notre-Dame at Tongres (fig. 4). It is of wood covered with thin silver plates (ht. 6.7, l. 4, w. 2.3 cm.). On the front the following inscription is embossed:

De ligno Dni de Sepulcro Dni Re^l Sce Marie et Sci Bavonis.

Part of the edge is still framed by a spirally decorated moulding. Otherwise the little casket is quite plain. It appears to be approximately wedge-shaped and was carried by rings at the sides.³

The last reliquary of this form known to me is in the famous treasury at Sens. Of the whole group this is the one most likely to have been a *ministerium*. The material is copper gilt. It is more dumpy in proportion than the seventh-century examples and is obviously later in date. A strap is attached to the handles, but whether it is original I cannot say. Each of the long sides and the slope of the roof above it is of a single plate bent over the wooden interior. Each face is treated as a whole for purposes of decoration, the bend being disregarded. The decoration consists of nine box-mounted cabochons in rows of three, the central stone being the largest and being connected with those at the four corners by a row of repoussé dots. The border all round is similarly emphasized. The box-mounts of the stones are all of the same size, which is not the case with the stones themselves. A ring of coarse filigree is fixed round the

¹ Bull. Soc. nat. Antig. de France, 1898, p. 325.

² Congrès scientifique internat. des Catholiques à Fribourg (Suisse), 16-20 August 1897 (Brit. Mus. Lib. Ac. 214).

³ Trésor de l'Église N.-D. à Tongres: Tongres, 1890, 8vo, p. 25.

base of each mount. Such box-mounted stones are characteristic of work of the time of Charles the Bald. They appear here in rather an early form, and I think this casket may perhaps go back to the eighth century, but it is more probably of the ninth.¹

Second Group.

The next group of portable reliquaries is similar to the preceding except that the roof of the rectangular box is four-sloped; that is to say, the ends slope back as well as the sides, and form



Fig. 4. EIGHTH-CENTURY RELIQUARY, TONGRES.

sloping triangles instead of vertical gables. Most of the reliquaries of this form, known to me, belong to the ninth century, but the type lasted on through the middle ages. A good example of the fourteenth century is the *châsse* in the church of St. Cucufat at Barcelona. It stands on four lion's feet and has a slender crest-rib.² The most famous ninth-century example is one in the Treasury at Conques. It is called the reliquary of Pepin of Aquitaine or 'of the Circumcision'. It was made

¹ The catalogue of the *Exposition rétrosp. de l'art franc*, Paris, 1889, p. 41, no. 282, describes an exactly similar casket as in the Lyons Cathedral Treasury. No such object exists. The casket actually exhibited was the Sens casket. It was attributed to Lyons by mistake.

² *Bull. Mon.* 1888, p. 568.

for Pepin, son of Louis le Débonnaire, who reigned in Aquitaine from 817 to 838.¹ It consists of a wooden box covered with gold plaques (ht. 17.8, l. 18.6, br. 90 cm.). On the front is a crucifix between the Virgin and St. John with enamelled plaques in rectangular niches under the arms of the cross. In the back are three round-headed niches containing enamels. At each end is a seated figure embossed in silver, a later addition. On the roof in front are roundels of the sun and moon; on the back two enamelled birds; the plates covering the ends are of silver with reticulated decoration, also added at the same time as the figures. The handles are of silver-gilt and are true handles, not strap adjustments, but they may date from the Restoration. The flat surfaces are adorned with filigree and with bands of ornament carrying jewels in ribbon settings. The filigree is obtained by twisting two fine wires together. The Frankish jewellery tradition is observable in details throughout, but the flat cloisonné jewel mosaic of the seventh century has disappeared, and its place is taken by enamels. Two of the plaques appear to be Byzantine. They are of champlevé in gold and the enamels are translucent. The wings of the eagles are of blue, white, and red cloisonné. Like most of the Conques treasures this reliquary is not in its original condition, nor are all the ornaments of one date and origin. The enamels are certainly not homogeneous and some had been previously used elsewhere.

The châsse of the Virgin's Shift, formerly at Chartres, now known only from an old engraving,² may have been of somewhat similar character to Pepin's. Charles the Bald presented the relic and probably also its casket. On its roof were affixed two eagles whose feathers are described as being of red and green enamels. As, however, they were believed to be the work of St. Eloy, that is to say of the seventh century, they were probably of cloisonné pastes.

Two reliquaries of copper gilt at Utrecht and Beromünster respectively appear to have come from a single workshop. The Utrecht example (5.1 by 6 by 3 cm.) is in the Archiepiscopal Museum. That in the Abbey of Beromünster, Switzerland, is reproduced by Molinier.³ It is nearly twice the size (ht. 9.5 cm.) of the other. The Utrecht casket is dated by De Linas to the first half of the eighth century. Each face is framed within a border of flat rectangular garnets. Within this frame

¹ It has been frequently reproduced. See Darcel in *Mém. Soc. Nat. Antiq. de France*, xxviii, p. 122; *Ann. Archéol. Bruxelles*, xv, p. 432; Molinier's *Orfèvrerie*, pl. iii, p. 87.

² *Bull. Mon.* 1885, p. 634, and 1891-2, p. 309.

³ *Orfèvrerie*, p. 25; Cabrol's *Dict.*, iii, col. 1138.

on the principal face is a large central cabochon aquamarine set around with garnet discs. It is flanked by two crosses set with flat garnets. The blank spaces are filled with a simple foliation, and the whole design is cut in a deep relief and entirely gilt even in the hollows, though they were filled with a white transparent enamel. This at a later time was scratched out and replaced by a red composition, most of which has disappeared. In its ornamental details this chûsse is said to possess many points of resemblance to the sarcophagus of St. Léothade (Bishop c. 680) in the cathedral of Auch.

The Beromünster casket¹ is inscribed + *Warnebertus pp fieri iussit ad conservando (sic) reliquias sci (sic) Marie Petri ope tribuant ipsius pontefice Amen.*

The several sides are here also framed in a decorative border but set with discs instead of squares. There was a great central cabochon in the middle of the front, and one in the sloping panel above; both have been replaced by a locking attachment. The cabochon below was surrounded by two rings of set discs and flanked by crosses. Both these reliquaries were made to be carried by a strap, and the metal ends to hold it remain on the Beromünster example. Possibly both may be as early as the eighth century. Neither is later than the ninth.

A silver reliquary in the Treasury of Cividale Cathedral is rather a rude example of the type (fig. 5). Its four sides are of silver plates embossed with standing figures of saints under depressed arcades, probably intended to be round-arched, and carried on spiral columns. There are four figures on each long side and two at each end. The figures are gilt. Above and below them is a band of foliated repoussé ornament. On the four smooth surfaces of the roof glass cameos and opaque enamel discs are attached in groove-edged box-mounts, the boxes being riveted down. The cameos are of the same school as that on the St. Maurice chûsse. They are of white glass paste let into a dark composition that holds them, except one which is of blue glass on a white glass ground. It is possible that this reliquary may date from the eighth century.

Another silver reliquary in the same Treasury appears to be later (fig. 6). It is substantially of the same form but its proportions are much more slender, and the whole is drawn out into a tall wedge. It stands on four little feet like the Nona reliquary. Its decoration is very simple. A strip of silver with a line of embossed beads down the middle between two lines of smaller beads outlines the whole object and separates the roof panels

¹ *L'Art ancien à l'Exp. nat. suisse: Album illustré publié par le Comité du Groupe 25*; Genève, 1896, pl. 48 (V. and A. Mus. Lib. 56 c.). See also J. L. Aebi in the *Geschichtsfreund*, xxiii, pp. 231 ff.

from those of the body. The silver plates covering the whole are decorated with figures embossed by help of a stamp. The same figure is repeated five times. There are also a Crucifixion and a Nativity similarly stamped, and some smaller ornaments. A large cabochon in a gold setting with surrounding turquoises has been riveted on later without regard to the two figures over which it partly spreads.

A rather rudely fashioned reliquary in the Treasury of Sion



Fig. 5. RELIQUARY, CIVIDALE CATHEDRAL.

Cathedral, Switzerland, is inscribed on its under side: *Hanc Capsam dicatā in honore s̄cē Mariae Altheus ēps fieri rogavit.*

Bishop Altheus is said to have been Charlemagne's friend and counsellor, but according to the learned Besson we know little about him. The inscription, however, securely dates this reliquary to the end of the eighth century,¹ but not all the work now visible upon it is original. It consists of a wooden box covered with silver-gilt plaques (14 cm. by 16 cm. by 6½ cm.). Full-length figures of the Virgin and St. John are embossed on the sloping part of the front with a foliated orna-

¹ M. Besson, *Antiquités du Valais*, p. 31.

ment below each. On the ends are a half-length figure below and a foliated ornament above. The suspension rings at the ends are not original. The panels are outlined by rows of coarse embossed beads. The back appears to have originally been plain, but on the upper part a flower and leaves have been embossed, probably in the eighteenth century. An enamel medallion is set in the middle of the flower and two enamel plaques are attached on the flat surface below. At what time

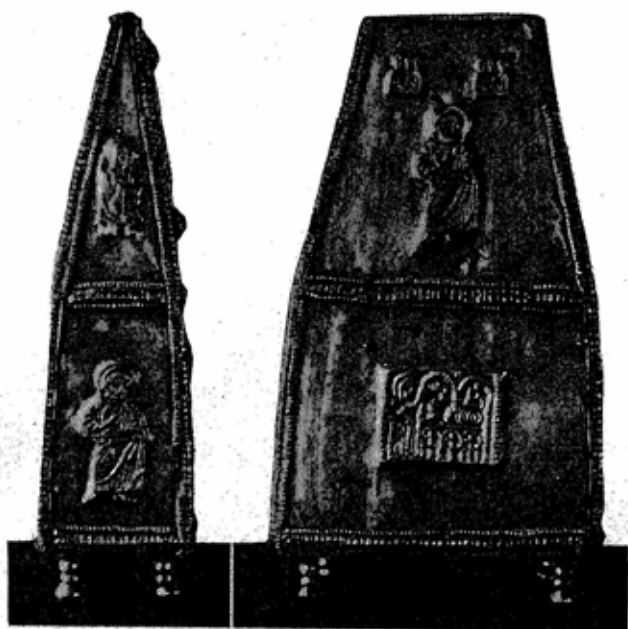


Fig. 6. RELIQUARY, CIVIDALE CATHEDRAL.

these enamels were fastened on is uncertain, but they appear to be quite characteristic Lombard work of about the ninth century.

A small wedge-shaped silver reliquary in the Treasury of St. Maurice d'Againe, often attributed to a later date, seems to me to belong to the ninth century (fig. 7). The front was decorated with four rows each consisting of five box-mounted jewels and a top row of three. Nineteen of these twenty-three stones are still in place. A repoussé foliated decoration of simple character covers the back. The borders all round are edged with metal strips embossed into large beads.

A much altered reliquary in the Treasury at Hildesheim may (in its original condition) have been of similar character. In 1597 whatever jewels were mounted on its front were taken off and a Virgin and Child in a *mandorla* were embossed all over the previously smooth surface. Some of the ribbon-mounted jewels were replaced in new positions, but existing holes show the positions formerly held by them or others. A tenth-century Fatimite crystal knob decoratively carved is fixed on the top.

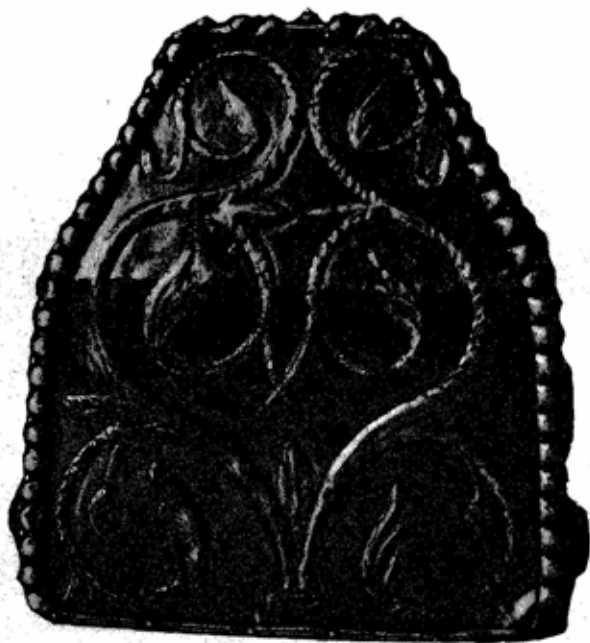


Fig. 7. RELIQUARY, C. NINTH CENTURY, ST. MAURICE D'AGAUNE (BACK).

The last ch^âse of this type that falls within our period is in the cathedral of Astorga, Spain.¹ It was presented by Alfonso III, king of Oviedo, and his wife, the same who are named on the well-known Cross of Victory at Oviedo. It is thus certainly to be dated between 866 and 910. It appears to have been made in the same workshop as the Oviedo crosses. It is larger (30 cm. by 17 cm. by 20 cm.) than the ch^âsses we have thus far considered. The exterior is of silver embossed and adorned

¹ *Las Joyas de la Exposición Historico-Europea di Madrid, 1892*, i, pl. 91 (V. and A. Mus. Lib. 56 c.); De Baye, *Notice sur un coffret*, etc., Paris 1893, 4to; Molinier, *Orfèvrerie*, p. 99.

with cloisonné enamels. The front has two stories of arcading with a plant under each arch in the upper row, an angel in the lower. These angels are rudely fashioned. The arcades are enriched with green and red pastes in the style of the Victory Cross. The general effect of the whole is rich. It stands outside the main stream of West European art development.

Third Group.

The third group of portable reliquaries differs mainly from the second in that the ends of the upper part instead of sloping straight back are curved in profile. The earliest example of this form is the roughly fashioned reliquary at St. Bounat d'Avalouse. Here the wooden box is covered with copper-gilt plates. An equal-armed cross occupies the whole front. There was a big cabochon in the centre and a smaller on each arm, the remainder of the arms being adorned with cloisonné pastes. The four divisions thus made are outlined with embossed beads framing an interlaced pattern similarly produced. The back is divided by a St. Andrew's cross and bordered by grooved strips riveted on, rather like those on the back of the Sion reliquary. The compartments of the back contain respectively either an equal-armed cross or the half-length of an Orans barbarously embossed. The combination of cloisonné pastes and cabochons points to an early date, perhaps even the seventh century.¹

The three reliquaries next to be considered offer a great contrast to the barbarism of this example. We may take first the Herford Reliquary in the Berlin Museum because its date can be fixed with some certainty between the years 785 and 807 (fig. 8). It belonged to the Collegiate Church of St. Denis at Enger (founded by Wittekind), which was united to St. John's at Herford in 1412. From Herford the reliquary passed to Berlin.² It has been suggested that it is one of the gifts from Charlemagne to the Saxon Duke Wittekind on his baptism in 785. On one side are six rude figures under round arches embossed on a silver plate. They represent Christ between two angels and the Virgin and Child between SS. Peter and Paul. There are angels also on the ends in similar work. The other face is richly decorated with large gems in heavy box-mounts, the remainder of the gold surface being covered with cloisonné stones and enamels, the stones being used in an interlaced ribbon design. Ten golden 'boxes' or compartments included between

¹ Reproduced on the same plate as the St. Benoit reliquary, *loc. cit.*, above.

² De Linas, *Émaillerie*, p. 111; O. v. Falke in Lehnert's *Gesch. des Kunstgewerbes*, i, p. 220; Hirth's *Formenschatz*, 1908, nos. 121-2.

the interlacings contain crude cloisonné enamels forming a bird, a snake, or a fish. The enamels are opaque. They are later in date than the enamels on the St. Maurice reliquary and on an Irish binding from Lindau, but they appear to be the earliest example in the North of the use of gold cloisons to contain enamels. Along the crest of the reliquary are five lions not unlike the beasts on the 'Tassiloleuchter' at Kremsmünster. The effect of the jewelled front is very rich and magnificent.



Fig. 8. THE HERFORD RELIQUARY, EIGHTH CENTURY.

Even more splendid is the reliquary in the Vienna Schatzkammer, called the reliquary of St. Stephen.¹ This is too well known to need description here. It is of Carolingian date. The surface is covered all over with box-mounted stones of all shapes and sizes. Some of them are ridge-backed. Along the crest runs a row of nine stones set up vertically in frames so as to be seen from both sides, but this is a late Gothic replacement of some earlier decoration like that on the Herford casket. The reliquary forms part of the Imperial Treasury and came from Aix-la-Chapelle.

¹ Bock's *Kleinodien*, ii, p. 53; De Linas, *Émaillerie*, p. 111.

The Capsa Aurea at Monza, made to contain a tooth and other relics of St. John the Baptist, is a third very splendid reliquary. It is not in its original condition. Its probable date is the time of Berengarius (king of Italy 888; emperor 916; died 924) and can hardly be later than the end of the ninth century. The jewelled front presents many features in common with the Herford casket. The original condition of the front is shown in a Lombard picture of the school of Leonardo, formerly on the organ, but now in the library of Monza Cathedral. It depicts the restitution of the treasure made in 1345 by Matteo Visconti. We find the same large stones mounted in the same relative positions, but on a smooth gold plate. The feet are lacking. So are the lions on the crest, and so is the filigree. I do not, however, think that the cresting is late, but am more inclined to the belief that the painter left it out. Ancient paintings are of doubtful authority for the details of treasures depicted in them. The back of the Capsa Aurea is decorated with a representation of the Crucifixion made by means of a multitude of impressions from a small circular punch. This design appears to be original.

The existence of these splendid ninth-century reliquaries may perhaps be accounted for by the fact that the setting up of reliquaries on the altar was sanctioned by Pope Leo IV (847-55) and by the Council of Reims in 867. Such sanctions usually consecrate an existing usage.

Other reliquaries of like form but less value are at Maestricht and Emmerich. The Maestricht example is of gilt copper-plates over wood. The front has an embossed border and carries an applied cross in champlevé enamel of Lorraine style of the twelfth century. The ends have a delicate foliation in gold and 'vernis brun', also twelfth century. The structure, however, is Carolingian.¹

The Emmerich châsse has a Crucifixion on the front with the Evangelist emblems in the spaces about it and an inscribed border all round:

*Hæ sunt reliquiae quæ sanctus Willibrordus
Romæ a papa Sergio accepit et Embrike transportavit.*

The box is of oak, covered on the Crucifixion side with blackened copper in which the patterns of figures are engraved and the lines gilt. On the other side the plates are of gold embossed with the emblems of the Evangelists again in four compartments. The lower division on the left was restored in the

¹ Boch and Willemson, *Kunst zu Maestricht*, Cologne, 1892, p. 66. There are photos of front and back in the Library of the Victoria and Albert Museum (*Gold and Silver*).

twelfth century and there are now two lions side by side. St. Willibrord died in 739. He founded St. Martin's at Emmerich and probably used these relics for that foundation.¹

CELTIC GROUP.

Most of the Celtic shrines, British or continental, are well known and here call for little more than mention. The earliest in type and perhaps also in date is that in the cathedral at Coire, attributed to the eighth century (fig. 9). It is of the same form

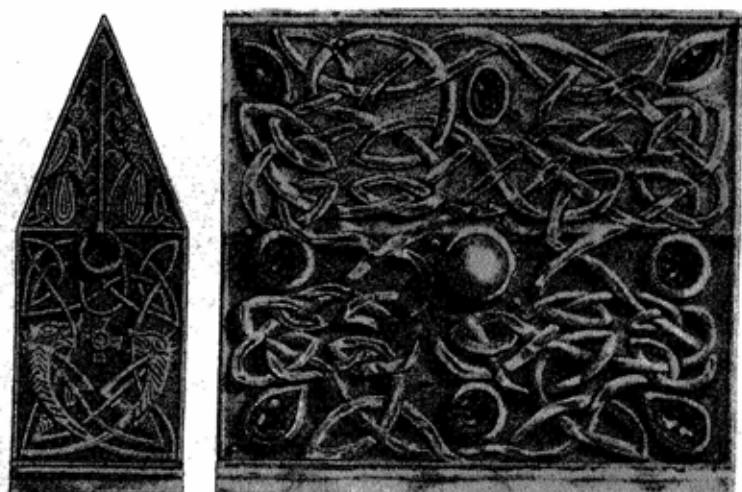


Fig. 9. EIGHTH-CENTURY RELIQUARY, COIRE CATHEDRAL.

as the St. Maurice jewelled casket. Except for nine glass paste jewels mounted on one face, its decoration consists entirely of embossed interlaced patterns in the gilt copper-plates that cover the contained wooden box. A strip of foliation on the back is an eleventh-century repair. The bottom opens with a sliding panel.² Some of the interlacings are of beasts, and there are a pair of birds on each gable-end feeding from the Tree of Life. All the decoration is of known Celtic type, and may be compared with that on the walrus-ivory casket at

¹ Aus'm Weerth, *Kunstd. in den Rheinlanden*, Leipzig, 1857, pls. 2 and 3; *Zeits. f. christl. Kunst*, 1912, cols. 321-8.

² *Mitt. d. Antig. Gesell. in Zürich*, xi (1857), Heft 7, p. 162; O. v. Falck, *Illustr. Gesch. d. Kunstgewerbes*, i, p. 220, figs. 181, 182.

Brunswick. Only the set cabochons have a decidedly continental appearance.

A reliquary in the Episcopal Museum at Namur is of similar character—a wooden box covered with copper gilt plates fastened down with silver nails. Interlacing designs are embossed upon the plates. Here the structure obviously suggests likeness to a building. The upper part is a roof with eaves and there is a torse moulding along the ridge. This *châsse* belonged to the collegiate church at Andenne. It contains a number of relics duly authenticated with labels. St. Begge, mother of Pepin of Herstal, received various relics from Pope Adeodatus when she was at Rome. She founded a nunnery at Andenne. Her sister St. Gertrude was closely associated with Irish missionaries. This *châsse* goes back to the earliest days of the foundation and is not later than the eighth century. In its present condition plates are gone from one side of the box and one slope of the roof. Part of one end also is lost.¹

A third continental *châsse* of Celtic type was sold at the Kaufmann sale in Berlin in 1917 (ht. 13, l. 12, w. 4.5 cm.). Its provenance appears to be unknown, but it is reputed to have come from the Upper Rhine (fig. 10). It is more elaborate than the others and belongs in structural type to the same group as the Herford Reliquary. Whereas the preceding caskets open at the bottom, the roof part of this one forms a hinged lid. The front is covered with copper plaques framed within bands of nielloed silver. The crest is of open-work and carries five paste cabochons. On the two front panels are other cabochon-pastes and some turquoises. The spaces between them are decorated with interlacings not repoussé but hammered in like the ornamentation of the Tassilo cup. The niello border is of a type found on Frankish and other barbarian jewellery. The interlacings show Celtic influence, but the whole is not Celtic either in design or in style. The back and ends are of plain copper gilt. The date may be as early as the eighth century.

The five portable Irish reliquaries are too well known to need description here.² They are:

The Lough Erne Shrine. National Museum, Dublin.

One found in a Viking Boat-burial at Melhus in Norway. Trondheim Museum.

One found in the Shannon. Edinburgh Museum.

¹ *Bull. des Musées roy. des arts*, déc. 1910, pp. 16, 28, with eleven figures.

² They are all described and figured in *Proc. Soc. Ant. Scotland*, xiv. See also *R. Soc. Ant. Ireland*, 5th ser., vol. ii (1892), p. 349. It is curious how closely they resemble in form an ossuary from Mycerial; but the resemblance is, of course, purely fortuitous. See *Rev. de l'art chrét.*, 1894, p. 339.

The Monymusk Shrine. Monymusk House, Aberdeenshire.
A shrine in Copenhagen Museum (fig. 11).

These portable Irish reliquaries evidently belong to the same types and are of about the same date as the whole series of Carolingian examples with which we have been dealing. They are merely an Irish version of a form common in West Europe.

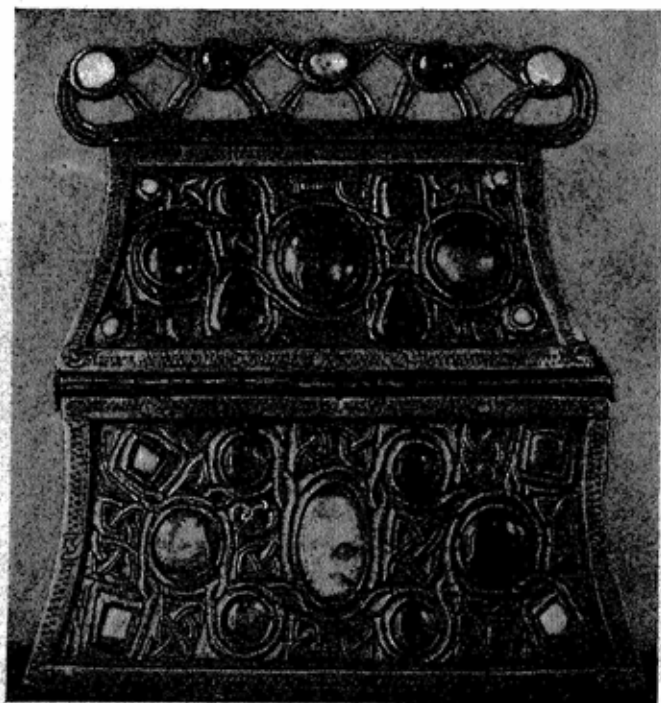


Fig. 10. EIGHTH-CENTURY CARLOVINGIAN RELIQUARY.

In the case of the Lough Erne Shrine there are flaps at the end, for the attachment of a strap, like those on the St. Maurice casket. I think it is the earliest of the group. The latest is perhaps the example at Copenhagen. All belong to the eighth or ninth century.

Another Irish portable reliquary is the Breac Moedog in the National Museum, Dublin. It is covered with plates embossed with small full-length figures, and as far as the decoration is concerned is of about the eleventh century. But in form this

casket belongs to the earliest type, and the box itself may date from the seventh century. The leather satchel made to contain it is perhaps earlier than the figured decoration on the casket itself.

MISCELLANEOUS EXAMPLES.

A few portable reliquaries of miscellaneous form may here find mention. One, of the seventh century, at Juvigny-les-Dames (Meuse) is rather a Eulogion-vase or Ampulla than an ordinary

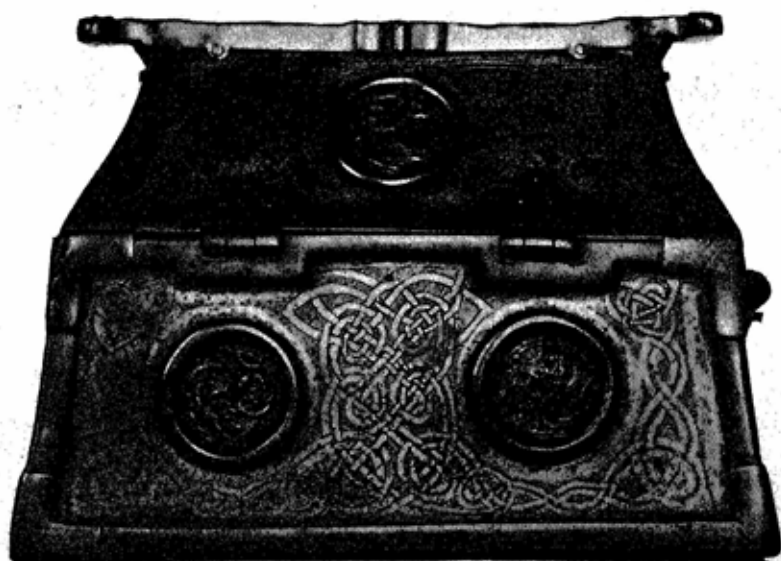


Fig. 11. RELIQUARY OF IRISH WORK, COPENHAGEN MUSEUM.

reliquary. It contains relics of Saint Scolastica and is inscribed:

ΕΥΛΟΓΙΑ ΚΥΡΙΟΥ [ΕΚ ΤΩ]Ν ΑΓΙΩΝ ΤΟΠΩΝ.

In form it resembles a pilgrim bottle. It is made of two lead plates, the front convex, the back flat, and it has a long neck. There is a band of leather round the foot of the neck (part of the attachment for suspension), and there is another leather round the belly. I have seen no picture of it, but from the description should judge it to be a Palestinian Ampulla, intended to contain relics from the Holy Places, which was afterwards employed to hold other relics.

There used to be at Sainte-Croix Abbey at Poitiers a very splendid box covered with metal-gilt or gold plates and mounted all over with gems. It is known to us only from a representation of it included in a seventeenth-century picture still existing at Sainte-Croix and from descriptions in old inventories.¹ It was obviously of Carolingian date.

A silver cup² (once gilt) on a medieval stem-mount in Hildesheim Treasury appears to be of very early date and may in fact have been given, as reported, by Louis the Pious on the foundation of the bishopric in 815. The surface is covered with a depressed foliated design of simple character. It is called the *Lipsanoteca Mariana*. A cornelian gem amongst those set on the mount may have come from an earlier setting of the same object. It bears a Cufic inscription and is of about the tenth century.

The silver reliquary of the head of St. Sebastian in the Christian Museum at the Vatican was placed in the SS. Quattro Coronati by Gregory IV (827-44). It is inscribed *Greg. IIII Ep̄s op. f. ad decorem capitis beati Sebastiani*. In the cup is a monogram, which has been read Anatole, surrounded by a wreath in which oriental influence has been suggested. This monogram is of a type which hardly descends later than the seventh century. Yet the reliquary in its present condition appears to be of the ninth century. It is a covered cup on a low stand (inside diam. 26 cm.) with roundel designs in niello within the cover and at the bottom of the cup. On the exterior are designs of leaves deeply incised into the silver and gilt, and of lobes filled with a blue transparent enamel. The lower part was restored in the seventeenth century with a repetition of the design on the cover. The niello designs resemble those on a dish from Cyprus in the British Museum. Possibly this reliquary may be a sixth-century bowl redecorated in the ninth century.

A Carolingian covered silver bowl bequeathed to the British Museum by Sir A. W. Franks, to which the Society's attention has already been called at length,³ may likewise have been used as a reliquary though it can scarcely have been made for one. It is thought to be of north-west European make.

I have been told that there is a ninth-century reliquary in S. Maria on the Aventine at Rome but have not been able to get any information about it.

One in the form of a lantern, of this date, is in Beaulieu church (Corrèze). It is of copper plated over with silver gilt.⁴

¹ *Mém. Soc. Ant. de l'Ouest*, 1881 (Poitiers, 1882), pp. 315 ff.

² Photo in Bertram's *Hildesheimer Kunstschatze* (M. Gladbach, 1913).

³ *Archaeologia*, vol. lxi, p. 357, pl. xlvii; *Proceedings*, xxiii, p. 304.

⁴ *Trésors des Églises etc. exposés au Trocadéro en 1889*, vol. i, phot. no. 19.

A reliquary in the form of a barrel is in private possession at Digoin.¹ It was made to contain a finger of St. Leger, bishop of Autun. The barrel is of wood. Four gold bands surrounded it. Now there are only three; the fourth is supplied by a silver gilt restoration. The three original bands are inscribed: *Os Leodegarii Martiris ex . . . M Isto clausit Loculo . . .*, in small majuscules of about 880-900. The letters are formed by a number of tiny punctures retaining a black substance rubbed in. A crystal is set in the middle of one end of the barrel and an agate in the other. In place of the bung is a hole about the size of a five-franc piece surrounded by an octagonal frame. This was for the inspection of the relic.

Bone caskets were no doubt common down to Carolingian days. One at Sion is of the form of the third group above described.² A lead plate is fastened on each face, and one bears the name Amalricus. Other bone reliquaries or fragments of such are in Liège Cathedral, at Séry-les-Mézières (Aisne), three at Cologne (in St. Gereon's and St. Andrew's), one at Coire (said to be of the eleventh century). Fragments of a Carolingian bone reliquary were found within the altar of the crypt of St. Pantaleon's at Chillon. Mere mention will suffice of the walrus-ivory casket of Northumbrian workmanship in Brunswick Museum of the ninth century and the Franks casket of whalebone in the British Museum, likewise Northumbrian, of the eighth or even the seventh. A reliquary made of plaster of about the same date is in the museum at Hanover.

Byzantine reliquaries, such as two in the treasury of the Sancta Sanctorum at Rome, do not fall within the limits I have proposed to myself in this paper.

The general result of our investigations may be briefly stated. Apart from the early reliquaries, which appear to have been precious boxes turned from their original purpose and casually employed to hold relics, it is fairly obvious that the type originated in a form derived from that of some fifth-century sarcophagi. This was simplified into the shape of a rectangular box with a lid of double slope and vertical ends with gables. The four-sloped top followed. The adjustment of a strap for safe portability led to the box assuming a taller and flatter form, and the concave ends arose to afford a convenient place for the suspension rings. The Celtic development, whereby the whole took more or less the form of a roofed building, was not an original motive of the design but a fanciful alteration of an

¹ *Mém. de la Soc. éduenne*, 1900, Autun, p. 1.

² Besson, *Antiq. du Valais*, pl. x.

originally simpler outline. A reliquary was essentially not a house but a tomb.

Mr. REGINALD SMITH said that archaeologists were indebted to the author not only for collecting illustrations of antiquities at great trouble and expense, but also for making use of them by periodical exhibits to the Society. A sequence had been pointed out in the forms of roof, and reliquaries with gable ends occurred in the eighth century, but they were also common during the thirteenth and fourteenth centuries in western Europe, and the gap could no doubt be satisfactorily filled. He inquired if any limits could be set to the use of ridged crystals, such as were used for ornamenting shrines and book-covers in various parts of Europe.

The PRESIDENT thought the paper might be discussed from many points of view, and agreed that exhibits of selected series from the author's portfolios were most instructive. He had himself first-hand knowledge of most of the reliquaries in question, and, except for the consecrated vessels, had handled the St. Maurice d'Againe treasure, which, with Conques, might be considered the finest of its kind. The history of cloisonné enamel had already been elucidated in *Archaeologia*, lviii, 237, and in connexion with the Herford reliquary, he might refer to the treasure of Petrossa, of which admirable reproductions were in existence. The origin claimed for the reliquaries did not meet all requirements, and he was convinced that the Astorga specimen, like many similar examples in Spain, was derived from the Moorish form of casket. The shrine provided by a pious donor would often be the best in his possession, though not necessarily made for the purpose, and having no connexion with the classical sarcophagus.

Sir MARTIN CONWAY replied that the Astorga reliquary had been considered apart from the main line of development: most of the others illustrated had been made as reliquaries. At a later date boxes of various kinds had been used for the purpose. Examples both of the straight and sloping roof went back to the seventh century, the curved ends being known in the eighth, and common in the ninth century. The first two types continued through the middle ages. He had not collected all the evidence as to ridged crystals, but they seemed to range from the ninth to the twelfth century.

Thanks were ordered to be returned for this communication.

WALTER KNIGHT, EARL FERRERS, raised the question of the preservation of old cottages and villages under the Housing Bill now before Parliament, and moved the following resolution :

‘That this Society expresses an earnest hope that Parliament will insert an amendment in the Housing Bill to safeguard the natural beauties, the architectural interest and the historical associations of our existing ancient buildings and their surroundings.’

The resolution was seconded by PHILIP NORMAN, Esq., LL.D., carried unanimously, and ordered to be forwarded to the President of the Local Government Board and communicated to the Press.

THURSDAY, 26th JUNE 1919.

Sir CHARLES HERCULES READ, Knt., LL.D.,
President, in the Chair.

The following were admitted Fellows :

Charles Henry Hunter Blair, Esq.
Louis Colville Gray Clarke, Esq.
Richard William Goulding, Esq.

A ballot was taken for the Election of Honorary Fellows, at the close of which the following were declared duly elected :

Professor James Henry Breasted.
Professor Pierre Paris.
Professor Paul Perdrizet.
M. Léon Coutil.
Professor Federico Halbherr.
Professor Paolo Orsi.
Dr. Haakon Shetelig.
Dr. Valerios Stais.

RALPH GRIFFIN, Esq., F.S.A., and MILL STEPHENSON, Esq., F.S.A., read a paper on notes on two Rolls of Arms, one belonging to the Fitzwilliam Museum, Cambridge, and the other to Everard Green, Esq., F.S.A., Somerset Herald, with remarks on similar rolls and a suggestion as to their common origin. The paper was illustrated by the two rolls and also by another belonging to the Heralds' College. Of the two rolls

with which the paper dealt, that belonging to Mr. Green was written about 1500 and was clearly copied from that belonging to the Fitzwilliam Museum, which in its turn appeared to have been copied from that belonging to the College. The common ancestor of these two and of other rolls was probably written towards the end of the thirteenth century and was possibly the roll belonging to the Heralds' College.

MR. COCKERELL said that Mr. Griffin had omitted to explain that the roll had come into the possession of the Fitzwilliam Museum through his own generosity.

The PRESIDENT regretted that there had been no discussion of a paper that dealt with one of the most interesting branches of heraldry and displayed a vast amount of learning and research. Mr. Cockerell's disclosure would not have surprised those who were familiar with Mr. Griffin's characteristics, illustrating as it did the generosity of a true antiquary. It had been remarked by one who specialized in pictures that heraldry was of no use in archaeology; the same authority had insisted on the foreign origin of a picture which Sir Wollaston Franks later proved to be English by identifying the coat of arms in a corner of the canvas. A curious feature was the alteration of the rolls for genealogical purposes, and the practice was not confined to the sixteenth century. The thanks of the Society were due not only to the authors, but also to Mr. Cockerell and the Chapter of the Heralds' College for exhibiting their rolls.

P. M. C. KERMODE, Esq., Local Secretary for the Isle of Man, presented a report on the excavation of a prehistoric camp at Balladoole, Arbory, Isle of Man. The excavation was undertaken under the auspices of a committee formed to make a survey of all the antiquities in the island.

The earthwork contained in its south-west end 'Keill Vael' or 'Michael Church', a small rectangular building, measuring internally 16 ft. 9 in. by 10 ft. The walls were of unhewn stones and did not stand to a sufficient height to show window-openings. An unusual feature in buildings of this age was the presence of an outer footing to the walls. The base of the altar against the east wall measured 4 ft. 7 in. by 2 ft. 7 in. The floor had been paved, possibly at a later date, with small thin slabs of black limestone. Outside, the church was surrounded at a distance of 9 ft. by a low mound of earth strengthened with small rounded stones. The date of the building would appear to be not later than the seventh century.

After excavating the 'Keill', attention was turned to the area in which it was placed. Throughout the area were hollows and low irregular mounds, and east of the 'Keill' was a well-defined circular ring mound, 19 ft. in diameter. In the centre was found a lintel-grave of black limestone 6 ft. long by 18 in. to 24 in. wide. Near by were found four more lintel-graves. These would appear to be evidence for a Celtic Christian settlement.

A possible indication of the date of the formation of the camp was afforded by the discovery of two urn burials, which in the island point to the Bronze Age. Many food-shells and bones and teeth of mammals were discovered throughout the area excavated. These were of later date, and so far as they had been examined suggested a period of occupation immediately before the camp was taken over for a Christian cemetery. The camp itself measured 310 ft. by 195 ft. in greatest width, and its embankment showed a change in construction in its different parts, being more strongly built towards the east, where there was a gap, possibly designed. The southern embankment was surmounted at its highest point by six large quartz boulders, and behind these were the remains of possibly another row.

It was hoped that the examination of the camp might be continued in the summer, when many points at present doubtful should be determined, notably the precise species of the animal remains found.

Thanks were ordered to be returned for these communications.

The ordinary meetings of the Society were adjourned until Thursday, 20th November 1919.

ACCESSIONS TO THE LIBRARY

FOR THE PERIOD JULY 1, 1918, TO JUNE 30, 1919.

The following list of accessions is arranged under subjects. A topographical list of those books which can be so catalogued is added.

The name of the donor is added in square brackets.

ARCHITECTURE.

- Antoniades, E. M. *Ἐκφρασις τῆς Ἀγίας Σοφίας*. [G. Eumorfopoulos, F.S.A.]
 Baker, F. V. Architectural History of Dartford Church, Kent. [Author.]
 Brangwyn, F., and Sparrow, W. S. A Book of Bridges.
 Clinch, G. Notes on the remains of Westenhamer House, Kent. [Author.]
 Gardner, S. A guide to Harrow church. [Author.]
 Goss, C. W. F. Crosby Hall: a chapter in the history of London. [Author.]

ARMOUR.

- Fellows, G. Arms, armour, and alabaster round Nottingham. [R. Griffin, F.S.A.]
 The Wilton suits. [Messrs. Sotheby.]

ART.

- Carnegie, Lady. Catalogue of the collection of antique gems formed by James, 9th Earl of Southesk, K.T. [Author.]

ASSYRIOLOGY.

- Thompson, R. C. A handbook to the History and Antiquities of Mesopotamia. [Author.]

BIBLIOGRAPHY.

- Goddard, E. H. Existing materials for Wiltshire bibliography. [Author.]
 Stokes, H. P. Cambridge stationers, printers, bookbinders, etc.

BIOGRAPHY.

- Broxap, H. A biography of Thomas Deacon.
 Cullum, C. M. G. Mary Beale. [Author.]
 Jones, A. The history of Gruffydd ap Cynan.
 Nichols, F. M. The Epistles of Erasmus. [P. S. Allen.]
 Ponsonby, R. The Imperial family of Japan. [Miss Farquhar.]
 Pope, A. A book of remembrance: the Popes of Wracklesford, Dorset. [Author.]
 Salzmann, L. F. Henry II.

Seton, W. W. Some new sources for the life of Blessed Agnes of Bohemia.

— Blessed Giles of Assisi.

Temperley, G. Henry VII.

See also: History (Family).

BRIDGES.

Brangwyn, F., and Sparrow, W. S. A Book of Bridges.

CASTLES, FORTIFICATIONS.

Curwen, J. F. The castles and fortified towers of Cumberland, Westmorland, and Lancashire north of the Sands. [Author.]

Passmore, A. D. Liddington Castle. [Author.]

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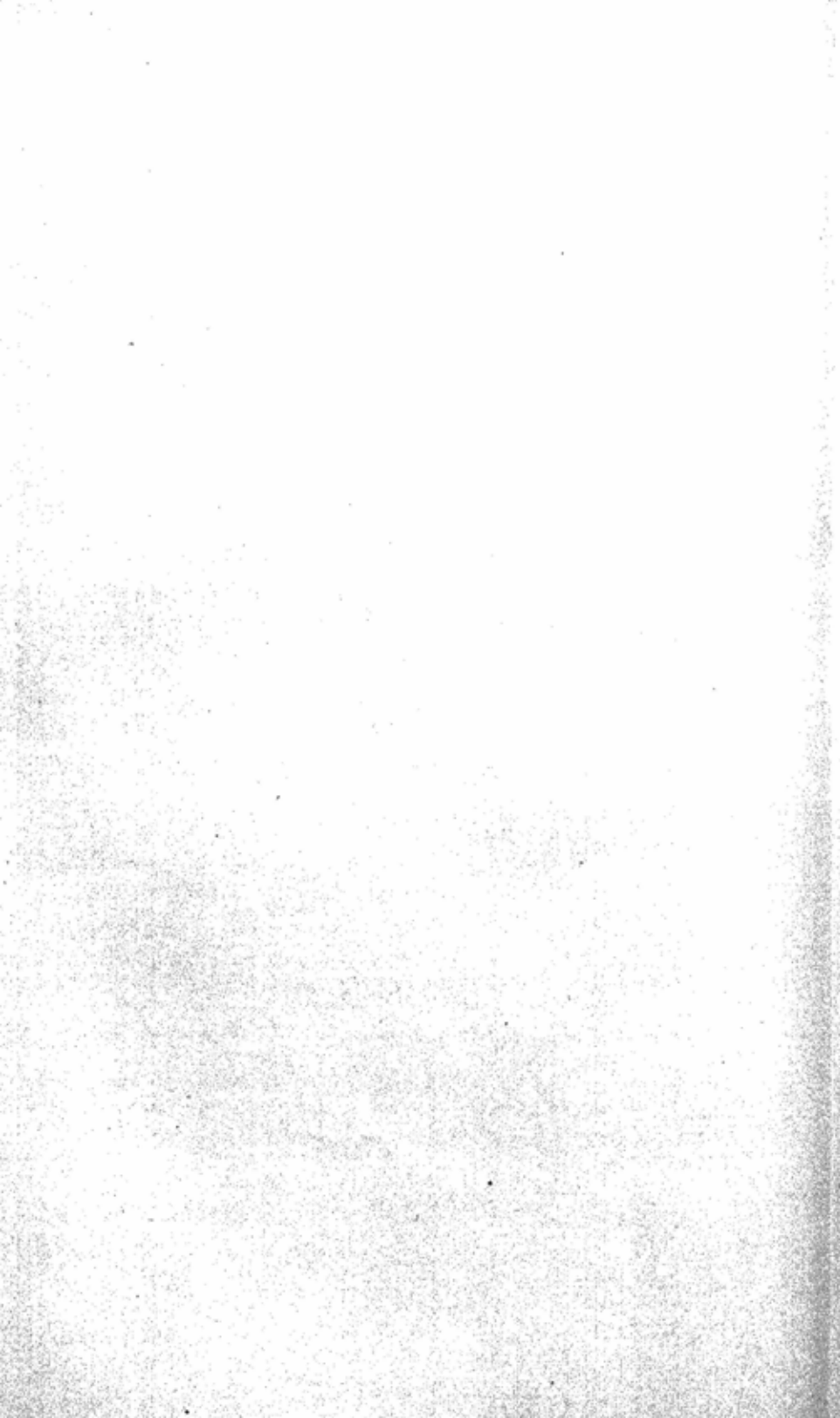
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SOCIETY OF ANTIQUARIES
OF LONDON

STATEMENT OF ACCOUNT
FOR THE YEAR 1918



NOTE ON THE ACCOUNTS FOR 1918

THE War is over *de facto* if not yet *de iure*; and the time has therefore arrived to gauge the effect it has had on our finances.

In certain directions, under the general tendency, our expenses have increased, though from the nature of our work we have not been seriously affected in this way. We have suffered somewhat in reduction of subscriptions, due to the Statute of 1916, which allowed Fellows who had joined His Majesty's service to pay one instead of three guineas. The sum of this loss can be measured when it is known that twenty-four Fellows availed themselves of the Statute. To the War may also be attributed the considerable reduction in new Fellows, the receipts from this source falling from £218 in 1913 and 1914 to £184 in 1915 and £126 in 1916. In 1917 they improved to £176, while 1918 tends to return to the earlier figures with £198.

These losses were met partly by instituting such economies as were possible and partly by a curtailment of our work, which, indeed, the War rendered inevitable; no reports of research work were published, for no research took place. The War further called away three of our staff, whose salaries thus became a reduced charge on our income. The absence of any volume of *Archaeologia* for 1918 is not, however, an economy, as, though it was impossible to print it, the sum of £600 has been put on one side, and shows in the Balance Sheet as available for that purpose so soon as conditions allow.

On the whole, then, the War has been to our financial advantage, and this has enabled us to follow the precedent of 1798 when the Society subscribed the sum of £500 as a free gift to the necessities of the nation. To-day our assistance has taken the form of subscription to some one or other of the various War Loans. Of these we hold on behalf of our three funds £2,850, the income from which will benefit the General Fund by £90, the Owen Fund by £5, and the Research Fund by £40.

The effect of the War has been to depreciate the value of all securities. Our investments were worth at the end of 1917 £12,589 less than the figure at which they have always stood in our books, though of course the income derived from them was in no way affected. In this connexion it is interesting to note that these same securities had by the end of 1918 already begun to show signs of improvement, having appreciated by £1,300.

WILLIAM MINET,
Treasurer.

INCOME AND EXPENDITURE ACCOUNT

INCOME.		£	s.	d.	£	s.	d.
Subscriptions		1852	12	0			
„ due		17	17	0			
		<hr/>			1870	9	0
Admissions		241	10	0			
Less $\frac{1}{8}$ to Research Fund		48	6	0			
		<hr/>			193	4	0
Dividends		840	1	0			
Income Tax repaid		213	6	0			
Court of Chancery		113	15	10			
		<hr/>			1167	2	10
Sale of Publications					25	3	7
Sundry Receipts:							
Interest on Deposit		18	10	5			
Sundries		22	8	6			
		<hr/>			40	18	11

£3296 18 4

FOR THE YEAR ENDING 31ST DECEMBER 1918.

EXPENDITURE.

	£	s.	d.	£	s.	d.
Publications	414	6	3			
Archaeologia Reserve Account	600	0	0			
				1014	6	3
Library :						
Books	58	18	8			
Binding	35	13	0			
Subject Catalogue	60	0	0			
				154	11	8
Subscriptions to Societies				44	16	0
Salaries, Wages, Allowances, Pension :						
Secretary	50	0	0			
" assistant	85	2	5			
Clerk and Librarian	335	0	0			
Porter	167	10	0			
" allowances	31	0	6			
Wages	177	12	6			
Pension Sir W. Hope	250	0	0			
Income Tax and insurances	69	1	3			
				1165	6	8
House Expenditure :						
Licences	1	16	0			
Insurance, Fire	26	4	0			
" Aircraft	12	14	0			
Lighting	60	17	6			
Fuel	67	18	0			
Tea at Meetings	14	3	5			
House necessities	29	11	2			
Cleaning	38	17	8			
Clock winding	8	3	6			
				255	5	3
Official Expenditure :						
Printing	40	10	3			
Postage	46	10	5			
Stationery	18	17	11			
Telephone	8	0	0			
				118	18	7
Sundry Payments :						
Legacy duty and costs	15	13	1			
Copying Minute Books	10	16	10			
Sundries	49	2	11			
				75	12	10
Repair Fund				150	0	0
				2978	17	3
Balance, carried to Balance Sheet				323	1	1

 £3296 18 4

REPAIR

	£	s.	d.
Balance, 31st December 1917	352	10	10
Appropriation from Income and Expenditure Account	150	0	0
	<u>£502</u>	<u>10</u>	<u>10</u>

BALANCE SHEET,

LIABILITIES.		£	s.	d.	£	s.	d.
Sundry Creditors					337	6	1
Owen Fund Income Account					31	12	10
Repair Fund					450	15	0
Archæologia Reserve Account					600	0	0
Balance, 31st December 1917		314	95	11 6			
Add over-estimate sundry creditors			20	18 6			
" balance from Income and Expenditure Account		323	1	1			
					<u>31839</u>	<u>6</u>	<u>1</u>

£33309 0 0

FUND.

Sundry repairs	£ s. d.
Balance to Balance Sheet	51 15 10
	<u>450 15 0</u>
	<u>£502 10 10</u>

31st DECEMBER 1918.

ASSETS.

	£ s. d.	£ s. d.
Investments—General Fund :		
Metropolitan 3 per cent. ¹	11060 5 2	
Metropolitan Water Board 3 per cent. 'B' Stock (at cost)	1000 0 0	
War Stock 5 per cent. (at cost)	1870 9 8	
National War Bonds 5 per cent. (at cost)	350 0 0	
Ditto—Stevenson Bequest :		
Bank Stock ¹	7162 6 4	
Great Northern 4 per cent. Perpetual Preference ¹	3692 7 6	
London and North Western 4 per cent. Guaranteed ¹	3768 6 1	
North Eastern 4 per cent. Guaranteed ¹	3741 3 1	
Midland 2½ per cent. Consolidated Perpetual Preference ¹	494 11 3	
	<u>32634 9 1²</u>	
Sundry Debtors :		
Subscriptions	17 17 0	
Publications	4 10 0	
	<u>22 7 0</u>	
Cash :		
Deposit Account	600 0 0	
Drawing Account	27 3 11	
In hand	25 0 0	
	<u>652 3 11</u>	
	<u>£33309 0 0</u>	

¹ Valued at Stock Exchange prices 31st December 1899.² The investments which stand at £32,634 9s. 1d. as above were worth £21,346 2s. 10d. at middle prices at the end of 1918.

We have examined the above Income and Expenditure Account and Balance Sheet with the Books and Vouchers and certify them to be correct. We have satisfied ourselves as to the existence of the Securities belonging to the Society. The value of the Library, Antiquities, Furniture, and Pictures of the Society is not taken credit for in the Books or the Balance Sheet.

18th March 1919.

FRANCIS W. PIXLEY.
JEROME N. BANKES.
RALPH GRIFFIN.
PERCIVAL D. GRIFFITHS.

RESEARCH FUND—

RECEIPTS.		£	s.	d.
Balance in hand, 31st December 1917	.	123	13	3
Dividends	.	156	13	4
Income Tax refunded: 1917	.	10	16	10
Subscriptions	.	50	8	6
Grant from General Fund, part admission fees	.	48	6	0
		<u>£389 17 11</u>		

SOCIETY'S INVESTMENTS,

Amount of Stock.		£	s.	d.
10588	19 7 Metropolitan 3 per cent.	11060	5	2
2128	9 6 Bank Stock	7162	6	4
2725	0 0 Great Northern Railway Consolidated 4 per cent. Perpetual Preference	3692	7	6
2757	0 0 London and North Western Railway 4 per cent. Guaranteed	3763	6	1
2761	0 0 North Eastern Railway 4 per cent. Guaranteed	3741	3	1
592	5 10 Midland Railway 2½ per cent. Consolidated Perpetual Preference	494	11	3
1010	1 0 Metropolitan Water Board 3 per cent. 'B' Stock	1000	0	0
1445	6 5 War Stock 5 per cent.	1370	9	8
350	0 0 National War Bonds 5 per cent. 1927	350	0	0

As per Balance Sheet £32684 9 1

SUMMARY OF CASH ACCOUNT.

		EXPENSES.		
		£	s.	d.
War Stock 5 per cent.	.	87	2	8
National War Bonds 5 per cent.	.	200	0	0
Balance	.	152	15	8
		<u>£889 17 11</u>		

31st DECEMBER 1918.

£	s.	d.	OWEN FUND.		
254	13	7	War Stock 5 per cent.		
RESEARCH FUND.					
1805	13	4	India 3½ per cent.		
500	0	0	J. Dickinson & Co., Ltd., 5 per cent. Preference.		
527	18	0	Victoria 3 per cent. Consolidated Inscribed.		
966	4	2	Metropolitan Water Board 3 per cent. 'B' Stock.		
600	0	0	War Stock 5 per cent.		
200	0	0	National War Bonds 5 per cent.		
					Amount of Stock.
					£ s. d.

Note.

In the High Court of Justice, Chancery Division.

In the suit of Thornton v. Stevenson.

The Stocks remaining in Court to the credit of this cause are as follows, viz.:

Great Western Railway 5 per cent. Guaranteed.	8894	0	0
Midland Railway 2½ per cent. Perpetual Preference.	14889	8	5
	<u>£23783</u>	<u>8</u>	<u>5</u>

After paying certain annuities, now amounting to £200 per annum, the Society is entitled to one-fourth share of the residue of the income of the above fund.

WILLIAM MINET,
Treas. S. A.

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